California Marine Life Protection Act Initiative
Central Coast Project

Candidate MPA Package 2

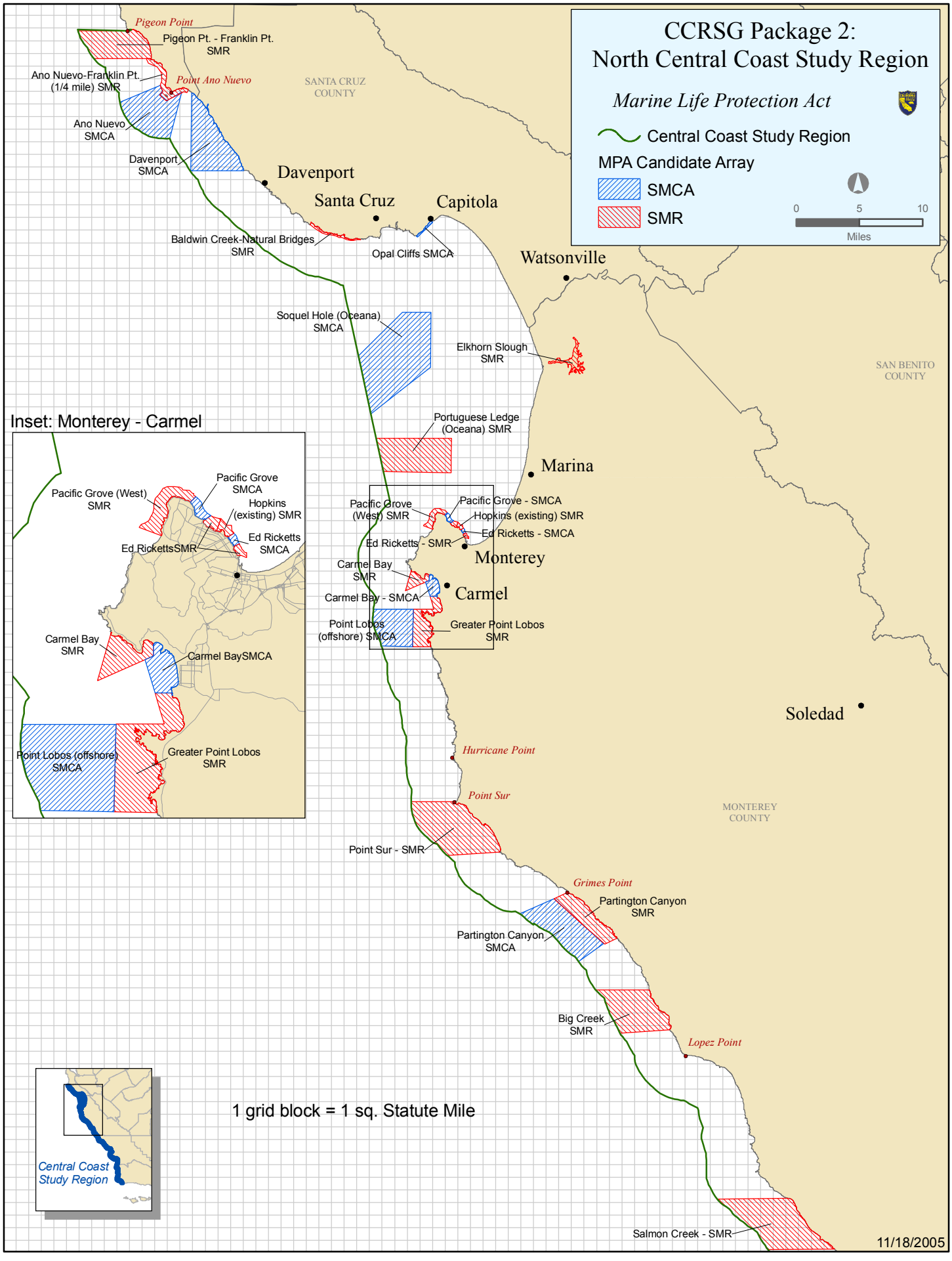
OVERVIEW OF CANDIDATE MPA PACKAGES

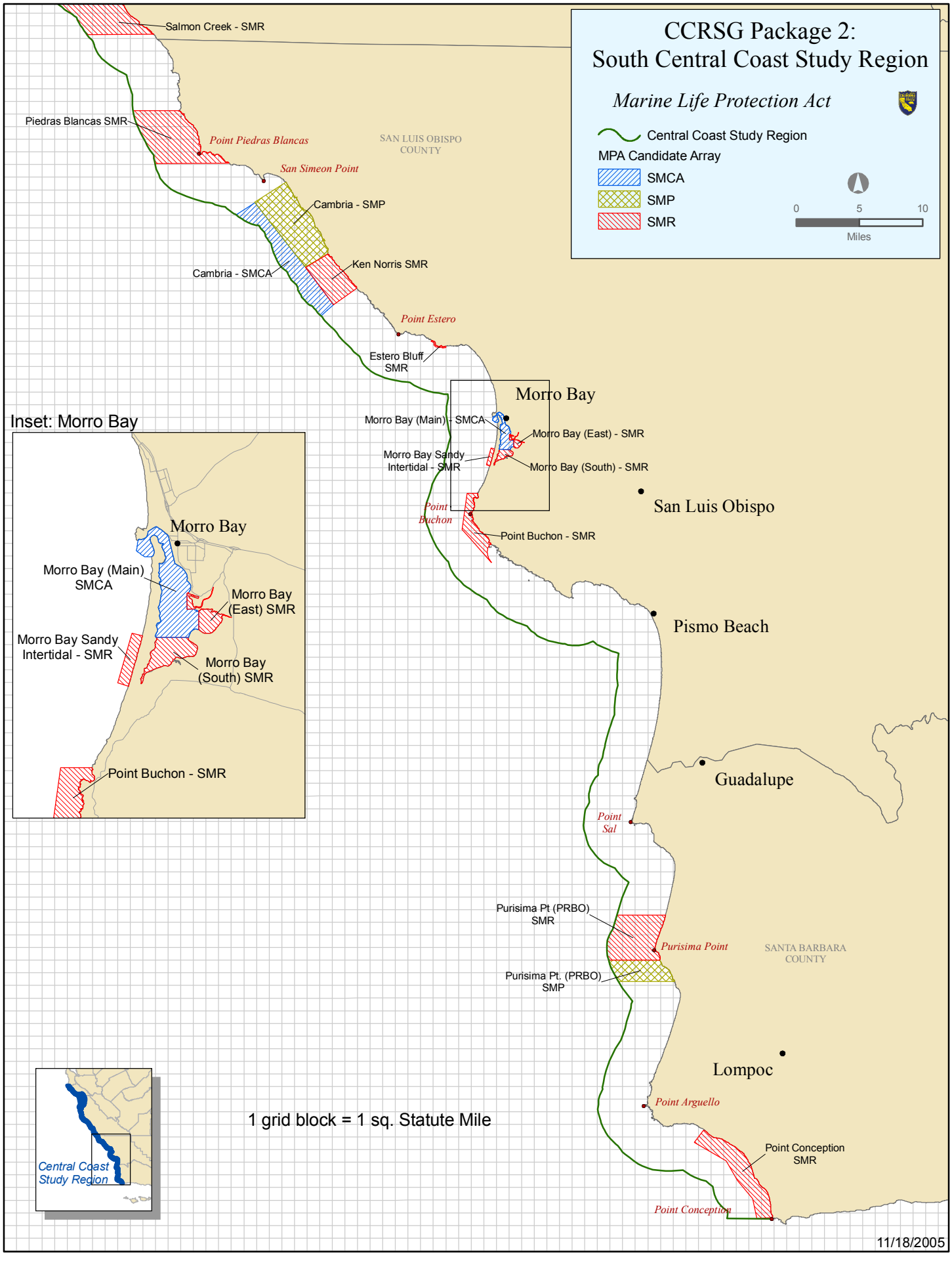
Package Name: CCRSG PACKAGE 2

Type of MPA	# Proposed	Area (sq. mi)	% of Study Region
State Marine Reserve	24	156.16	13.58%
State Marine Park	2	24.87	2.16%
State Marine Conservation Area	11	96.15	8.36%
All MPAs combined	37	277.18	24.10%

Individual MPAs in Package:

Pigeon to Franklin Point State Marine Reserve (10.9 sq. mi.)	Point Sur State Marine Reserve (20.42 sq. mi.)
Franklin Point to Ano Nuevo State Marine Reserve (2.26 sq. mi.)	Partington Canyon State Marine Reserve (6.47 sq. mi.)
Ano Nuevo State Marine Conservation Area (12.75 sq. mi.)	Partington Canyon State Marine Conservation Area (13.5 sq. mi.)
Davenport State Marine Conservation Area (14.38 sq. mi.)	Big Creek State Marine Reserve (13.66 sq. mi.)
Baldwin to Natural Bridges State Marine Reserve (0.59 sq. mi.)	Salmon Creek State Marine Reserve (20.5 sq. mi.)
Opal Cliffs State Marine Conservation Area (0.23 sq. mi.)	Piedras Blancas State Marine Reserve (18.59 sq. mi.)
Elkhorn Slough State Marine Reserve (1.53 sq. mi.)	Cambria State Marine Park (17.42 sq. mi.)
Soquel Hole State Marine Conservation Area (28.94 sq. mi.)	Ken Norris State Marine Reserve (7.87 sq. mi.)
Portuguese Ledge State Marine Reserve (15.14 sq. mi.)	Cambria State Marine Conservation Area (14.00 sq. mi.)
East Ed Ricketts State Marine Reserve (0.18 sq. mi.)	Estero Bluff State Marine Reserve (0.14 sq. mi.)
Ed Ricketts State Marine Conservation Area (0.09 sq. mi.)	Morro Bay State Marine Conservation Area (2.14 sq. mi.)
Hopkins State Marine Reserve (0.17 sq. mi.)	Morro Bay East State Marine Reserve (1.08 sq. mi.)
West Ed Ricketts State Marine Reserve (0.11 sq. mi.)	Morro Bay South State Marine Reserve (0.78 sq. mi.)
Pacific Grove State Marine Conservation Area (0.24 sq. mi.)	Morro Beach State Marine Reserve (0.41 sq. mi.)
Pacific Grove State Marine Reserve (1.01 sq. mi.)	Point Buchon State Marine Reserve (2.83 sq. mi.)
Carmel Pinnacles State Marine Reserve (1.42 sq. mi.)	Purisma Point State Marine Reserve (13.96 sq. mi.)
Carmel Bay State Marine Conservation Area (1.23 sq. mi.)	Purisma Point State Marine Park (7.45 sq. mi.)
Point Lobos State Marine Reserve (4.81 sq. mi.)	Point Conception State Marine Reserve (11.3 sq. mi.)
Point Lobos State Marine Conservation Area (8.59 sq. mi.)	


CCRSG Package 2:
North Central Coast Study Region
Marine Life Protection Act
Central Coast Study Region
MPA Candidate Array
SMCA
SMR
0
5
10
Miles
Pigeon Point
Pigeon Pt. - Franklin Pt. SMR
Ano Nuevo-Franklin Pt. (1/4 mile) SMR
Point Ano Nuevo
SANTA CRUZ COUNTY
Ano Nuevo SMCA
Davenport SMCA
Davenport
Santa Cruz
Capitola
Baldwin Creek-Natural Bridges SMR
Opal Cliffs SMCA
Watsonville
Soquel Hole (Oceana) SMCA
Elkhorn Slough SMR
SAN BENITO COUNTY
Inset: Monterey - Carmel
Portuguese Ledge (Oceana) SMR
Marina
Pacific Grove (West) SMR
Pacific Grove SMCA
Hopkins (existing) SMR
Ed RicketsSMR
Ed Ricketts SMCA
Carmel Bay SMR
Carmel BaySMCA
Point Lobos (offshore) SMCA
Greater Point Lobos SMR
Pacific Grove (West) SMR
Pacific Grove - SMCA
Hopkins (existing) SMR
Ed Ricketts - SMCA
Ed Ricketts - SMR
Monterey
Carmel Bay SMR
Carmel
Carmel Bay - SMCA
Point Lobos (offshore) SMCA
Greater Point Lobos SMR
Soledad
Hurricane Point
Point Sur
MONTEREY COUNTY
Point Sur - SMR
Grimes Point
Partington Canyon SMR
Partington Canyon SMCA
Big Creek SMR
Lopez Point
Central Coast Study Region
1 grid block = 1 sq. Statute Mile
Salmon Creek - SMR
11/18/2005


CCRSG Package 2:
South Central Coast Study Region
Marine Life Protection Act
Central Coast Study Region
MPA Candidate Array
SMCA
SMP
SMR
0
5
10
Miles
Salmon Creek - SMR
Piedras Blancas SMR
Point Piedras Blancas
SAN LUIS OBISPO COUNTY
San Simeon Point
Cambria - SMP
Cambria - SMCA
Ken Norris SMR
Point Estero
Estero Bluff SMR
Morro Bay
Morro Bay (Main) - SMCA
Morro Bay (East) - SMR
Morro Bay Sandy Intertidal - SMR
Morro Bay (South) - SMR
San Luis Obispo
Point Buchon
Point Buchon - SMR
Pismo Beach
Guadalupe
Point Sal
Purisima Pt (PRBO) SMR
Purisima Point
SANTA BARBARA COUNTY
Purisima Pt. (PRBO) SMP
Lompoc
Point Arguello
Point Conception SMR
Point Conception
Inset: Morro Bay
Morro Bay
Morro Bay (Main) SMCA
Morro Bay (East) SMR
Morro Bay Sandy Intertidal - SMR
Morro Bay (South) SMR
Point Buchon - SMR
Central Coast Study Region
1 grid block = 1 sq. Statute Mile
11/18/2005

Summary of Marine Protected Areas (MPAs) within Candidate MPA Package 2

Number and Type of MPAs in Package: 24 State Marine Reserves (SMRs), 2 State Marine Parks (SMPs), 11 State Marine Conservation Areas (SMCAs), TOTAL: 37 MPAs
Total Area of MPAs in Package (sq. mi.): 277.09

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Pigeon to Franklin Point State Marine Reserve (SS_Pigeon2Franklinv3_SMR)	10.9	3.1	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9
Franklin Point to Ano Nuevo State Marine Reserve (SS_Franklin2AnoQuartermilev2_SMR)	2.26	5.0	New MPA	No Take	Goal 1 – Obj. 1, 2 Goal 2 – Obj. 1, 3 Goal 3 – Obj. 3 Goal 4 – Obj. 1, 2 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9
Ano Nuevo State Marine Conservation Area (SS_Ano_SMCA)	12.75	2.2	Modified existing MPA	No squid or other small coastal pelagics (wetfish).	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1,2,3 Goal 3 – Obj. 1 Goal 4 – Obj. 2 Goal 5 – Obj. 2 Design Considerations: 1, 3, 5, 6, 7, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Davenport State Marine Conservation Area (SS_Davenport_SMCA)	14.38	7.4	New MPA	No groundfish	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1 Goal 4 – Obj. 2 Goal 5 – Obj. 2 Design Considerations: 1, 3, 4, 5, 6, 7, 8, 9
Baldwin to Natural Bridges State Marine Reserve (SS_BaldwinCr2NatBrid_SMR)	0.59	4.3	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 2, 3 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1 Design Considerations: 1, 3, 4, 5, 6, 7, 8, 9
Opal Cliffs State Marine Conservation Area (SS_OpalCliffs_SMCA)	0.23	1.7	New MPA	No invertebrate collecting	Goal 1 – Obj. 1, 4 Goal 2 – Obj. 4 Goal 3 – Obj. 1, 3 Goal 4 – Obj. 2 Goal 5 – Obj. 1 Design Considerations: 1, 3, 5, 6, 7, 8, 9, 10

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Elkhorn Slough State Marine Reserve (SS_ElkhornSlough_SMR)	1.53	7.6	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 2 Design Considerations: 1, 2, 3, 5, 6, 7, 8, 9
Soquel Hole State Marine Conservation Area (SS_SoquelHoleOceana_SMCA)	28.94	9.2	New MPA	Salmon, albacore and spot prawn allowed	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 2 Design Considerations: 1, 2, 3, 5, 6, 7, 9
Portuguese Ledge State Marine Reserve (SS_PortLedgeOceana_SMR)	15.14	5.9	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 2 Goal 5 – Obj. 2 Design Considerations: 1, 2, 3, 5, 6, 7, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
East Ed Ricketts State Marine Reserve (EastEdRicketts_SMR_Group1103_Dive1)	0.18	0.5	New MPA	No Take	Goal 1 – Obj. 1, 2, 3 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9
Ed Ricketts State Marine Conservation Area (EdRicketts_SMCA_group11103_dive1)	0.09	0.4	New MPA	Allowed: Hand Harvest Kelp only	Goal 1 – Obj. 1, 2, 3 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9
Hopkins State Marine Reserve (ExistingHopkins_SMR_group1103_Dive1)	0.17	0.6	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9
West Ed Ricketts State Marine Reserve (WestEdRicketts_SMR_Group1103_Dive1)	0.11	0.6	New MPA	No Take	Goal 1 – Obj. 1, 2, 3 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 5 – Obj. 1, 3 Design Considerations:1, 2, 3, 4, 5, 6, 7, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Pacific Grove State Marine Conservation Area (PacificGrove_SMCA)	0.24	0.8	Modified existing MPA	Allowed: Hand Harvest Kelp, Recreational fishing, No Poke-Pole fishing, no invertebrate collection	Goal 1 – Obj. 1, 2 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3, 4 Goal 5 – Obj. 1, 3 Design Considerations: 1, 3, 5, 6, 7, 9
Pacific Grove State Marine Reserve (PacificGroveWest_SMR_Group1103_Dive1)	1.01	2.2	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 - Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 3, 5, 6, 7, 9
Carmel Pinnacles State Marine Reserve (CarmelBay_SMR_Group1103_Dive1)	1.42	2.1	New MPA	No Take	Goal 1 – Obj. 1, 2 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 5, 6, 7, 8, 9
Carmel Bay State Marine Conservation Area (CarmelBay_SMCA)	1.23	1.7	Modified existing MPA	Recreational fishing (Except mollusks and crustaceans) and kelp harvesting allowed	Goal 3 - Obj. 1 Goal 5 - Obj. 1

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Point Lobos State Marine Reserve (GreaterPointLobos_SMR_Group1103_Dive1)	4.81	6.2	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 2 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1 Design Considerations: 1, 4, 5, 6, 7, 8, 9
Point Lobos State Marine Conservation Area (PointLobosOffshore_SMCA_Group1103_Dive1)	8.59	2.9	New MPA	Salmon and spot prawn allowed	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 2 Design Considerations: 1, 4, 5, 6, 7, 8, 9
Point Sur State Marine Reserve (SS_PtSurv2_SMR)	20.42	5.4	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 2 Design Considerations: 1, 2, 3, 4, 5, 6, 7, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Partington Canyon State Marine Reserve (SS_PartingtonCanyon1milev2_SMR)	6.47	5.4	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 8, 9
Partington Canyon State Marine Conservation Area (SS_PartingtonCanyon_SMCA)	13.5	5.4	New MPA	Salmon and spot prawn allowed	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 8, 9
Big Creek State Marine Reserve (SS_BigCreekv3_SMR)	13.66	3.6	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 2, 3 Design Considerations: 1, 2, 3, 4, 5, 6, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Salmon Creek State Marine Reserve (SS_SalmonCreek_SMR)	20.5	5.4	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 2, 4 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 5, 9
Piedras Blancas State Marine Reserve (SS_PiedrasBlancas_SMR)	18.59	6.3	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2, 3 Design Considerations: 1, 2, 3, 4, 6, 7, 8, 9
Cambria State Marine Park (SS_Cambriav4_SMP)	17.42	6.5	New MPA	No Commercial fishing	Goal 1 – Obj. 1, 2, 3, 4 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 5, 6, 7, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Ken Norris State Marine Reserve (SS_KenNorris_SMR)	7.87	3.6	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 2 Design Considerations: 1, 3, 4, 5, 6, 7, 8, 9
Cambria State Marine Conservation Area (SS_Cambriav2_SMCA)	14.00	10.1	New MPA	only salmon allowed	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 3, 4 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 3, 4, 5, 6, 7, 8, 9
Estero Bluff State Marine Reserve (SS_EsteroBluff_SMR)	0.14	1.4	New MPA	No Take	Goal 1 – Obj. 1, 2 Goal 2 – Obj. 3 Goal 3 – Obj. 1 Goal 4 – Obj. 2 Goal 5 – Obj. 2 Design Considerations: 1, 3, 4, 5, 6, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Morro Bay State Marine Conservation Area (SS_MorroBayMain_SMCA)	2.14	7.6	New MPA	Allows mariculture and recreational fishing	Goal 1 – Obj. 1, 2, 3, 4 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3
Morro Bay East State Marine Reserve (SS_MorroEast_SMR)	1.08	2.2	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1 Design Considerations: 1, 3, 5, 6, 7, 8, 9
Morro Bay South State Marine Reserve (SS_MorroSouth_SMR)	0.78	2.4	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1 Design Considerations: 1, 3, 5, 6, 7, 8, 9
Morro Beach State Marine Reserve (MorroBaySandyIntertidal_SMR_Group1110)	0.41	1.4	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1 Design Considerations: 1, 3, 5, 6, 7, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Point Buchon State Marine Reserve (SS_Buchonv2_SMR)	2.83	4.7	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3 Goal 4 – Obj. 1, 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 2, 3, 4, 6, 8
Purisma Point State Marine Reserve (SS_PurisimaPRBO_SMR)	13.96	3.8	New MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2 Goal 3 – Obj. 1, 2 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 3, 4, 5, 6, 8, 9
Purisma Point State Marine Park (SS_PurisimaPRBO_SMP)	7.45	2.0	New MPA	No commerical fishing; recreational shore -fishing only	Goal 1 – Obj. 1, 2, 3, 4 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 2, 3, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 Design Considerations: 1, 3, 4, 5, 6, 8, 9

MPA Name (concept file name)	Area (sq. mi.)	Alongshore span (mi)	Modification to Existing Central Coast MPA or new MPA?	Allowed/ Disallowed Uses	Regional Goals, Objectives, and Design Criteria toward which this MPA contributes
Point Conception State Marine Reserve (SS_Conception_SMR)	11.3	9.1	Modified existing MPA	No Take	Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – Obj. 1, 2, 3 Goal 3 – Obj. 1, 4 Goal 4 – Obj. 2 Goal 5 – Obj. 1, 3 1, 3, 4, 6, 9

Abbreviations:
MPA: Marine Protected Area
SMR: State Marine Reserve
SMP: State Marine Park
SMCA: State Marine Conservation Area

DRAFT ANALYSIS OF CANDIDATE MPA PACKAGE #2

	How measured?	*Total amount in Region*	*Total percent of Region*	*Amount in State Marine Reserves*	*Percent of Total in SMRs*	*Amount in State Marine Parks*	*Percent of Total in SMPs*	*Amount in State Marine Conservation Area*	*Percent of Total in SMCAs*	*Amount in all proposed MPAs in region*	*Percent of Total in existing MPAs*	*Spatial Data Source*
Area	**Area (mi^2)**	1150.01	100%	157.03	13.65%	24.87	2.16%	96.07	8.35%	277.97	24.17%	GIS analysis
Number of MPAs	**Count**		NA	24		2		11		37		GIS analysis
HABITATS												
Intertidal										0.00	0.00%	
Sandy or gravel beaches	**Linear (mi)**	223.66	52.3%	40.91	18.29%	4.59	2.05%	10.98	4.91%	56.48	25.25%	NOAA-ESI 2002
Rocky intertidal and cliff	**Linear (mi)**	209.21	48.9%	59.47	28.43%	4.20	2.01%	7.87	3.76%	71.54	34.19%	NOAA-ESI 2002
Coastal marsh	**Linear (mi)**	36.53	8.5%	13.63	37.30%	0.26	0.71%	1.44	3.95%	15.33	41.96%	NOAA-ESI 2002
Tidal flats	**Linear (mi)**	23.48	5.5%	8.99	38.27%	0.11	0.46%	3.97	16.91%	13.06	55.65%	NOAA-ESI 2002
Seagrass beds (0-30m): Surfgrass	**Linear (mi)**	161.09	37.7%	35.56	22.08%	4.08	2.53%	7.07	4.39%	46.71	28.99%	Minerals Management Service / Tenera Inc.
Seagrass beds (0-30m): Eelgrass	**Area (mi^2)**	1.07	0.1%	0.35	32.62%	0.00	0.00%	0.71	66.16%	1.06	98.78%	Elkhorn Slough Foundation; Morro Bay National Estuary Program
Estuary	**Area (mi^2)**	7.90	0.7%	2.59	32.78%	0.00	0.00%	2.06	26.08%	4.65	58.86%	Inventory; CNDDB; USGS
Fine-scale Soft bottom												Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region
0-30 meters	**Area (mi^2)**	24.21	5.7%	4.41	18.20%	0.16	0.64%	0.71	2.94%	5.28	21.79%	Total amount is only that which has been mapped to date.
30-100 meters	**Area (mi^2)**	93.72	21.9%	13.93	14.86%	0.40	0.43%	0.69	0.73%	15.02	16.02%	Total amount is only that which has been mapped to date.
100-200 meters	**Area (mi^2)**	1.93	0.5%	0.27	14.12%	0.00	0.00%	0.22	11.59%	0.50	25.71%	Total amount is only that which has been mapped to date.
>200 meters	**Area (mi^2)**	0.29	0.1%	0.01	2.06%	0.00	0.00%	0.00	0.69%	0.01	2.75%	Total amount is only that which has been mapped to date.
Coarse-scale Soft bottom												Greene et al 2004; coarse scale data overestimates soft substrata
0-30 meters	**Area (mi^2)**	294.14	25.8%	38.79	13.19%	7.84	2.67%	6.18	2.10%	52.81	17.95%	Greene et al 2004

	How measured?	***Total amount in Region***	***Total percent of Region***	***Amount in State Marine Reserves***	***Percent of Total in SMRs***	***Amount in State Marine Parks***	***Percent of Total in SMPs***	***Amount in State Marine Conservation Area***	***Percent of Total in SMCAs***	***Amount in all proposed MPAs in region***	***Percent of Total in existing MPAs***	***Spatial Data Source***
30-100 meters	**Area (mi^2)**	575.78	50.6%	74.01	12.85%	14.69	2.55%	43.17	7.50%	131.87	22.90%	Greene et al 2004
100-200 meters	**Area (mi^2)**	58.46	5.1%	8.65	14.79%	0.00	0.00%	6.04	10.33%	14.69	25.13%	Greene et al 2004
>200 meters	**Area (mi^2)**	105.52	9.3%	12.00	11.37%	0.00	0.00%	24.56	23.27%	36.56	34.64%	Greene et al 2004
Fine-scale Rocky reef; hard bottom												Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region
0-30 meters	**Area (mi^2)**	20.16	4.7%	9.61	47.69%	0.95	4.72%	0.32	1.60%	10.89	54.01%	Total amount is only that which has been mapped to date.
30-100 meters	**Area (mi^2)**	20.59	4.8%	6.18	30.01%	0.27	1.31%	0.24	1.16%	6.69	32.47%	Total amount is only that which has been mapped to date.
100-200m	**Area (mi^2)**	0.40	0.1%	0.03	7.05%	0.00	0.00%	0.06	14.85%	0.09	21.90%	Total amount is only that which has been mapped to date.
>200 meters	**Area (mi^2)**	0.01	< .01%	0.00	7.55%	0.00	0.00%	0.00	0.00%	0.00	7.55%	Total amount is only that which has been mapped to date.
Coarse-scale Rocky reef; hard bottom												Greene et al 2004; coarse scale data underestimates hard substrata
0-30 meters	**Area (mi^2)**	46.66	4.1%	11.86	25.41%	2.05	4.40%	5.20	11.13%	19.10	40.94%	Greene et al 2004
30-100 meters	**Area (mi^2)**	26.78	2.4%	3.18	11.86%	0.27	1.00%	2.56	9.55%	6.00	22.41%	Greene et al 2004
100-200 meters	**Area (mi^2)**	13.91	1.2%	2.47	17.78%	0.00	0.00%	3.85	27.67%	6.32	45.45%	Greene et al 2004
>200 meters	**Area (mi^2)**	16.16	1.4%	2.33	14.40%	0.00	0.00%	3.74	23.13%	6.06	37.53%	Greene et al 2004
Kelp forest												
1989 Kelp	**Area (mi^2)**	17.94	1.6%	5.30	29.54%	1.04	5.78%	0.40	2.21%	6.73	37.52%	1989 CDFG aerial survey
1999 Kelp	**Area (mi^2)**	2.56	0.2%	0.68	26.57%	0.07	2.58%	0.02	0.78%	0.77	29.93%	1999 CDFG aerial survey
2002 Kelp	**Area (mi^2)**	12.55	1.1%	4.82	38.42%	0.77	6.11%	0.53	4.20%	6.12	48.72%	2002 CDFG aerial survey
2003 Kelp	**Area (mi^2)**	9.53	0.8%	2.99	31.33%	0.61	6.39%	0.30	3.19%	3.90	40.90%	2003 CDFG aerial survey
Persistent Kelp	**Area (mi^2); present in 3 of 4 years**	3.18	0.3%	0.91	28.73%	0.37	11.70%	0.14	4.40%	1.43	44.84%	Present in 3 of 4 CDFG aerial survey datasets
Pinnacles *												
0-30 meters	**Count**	76.00		39.00		*		1.00		40.00		Bathymetry data
30-100 meters	**Count**	218.00		81.00		*		*		81.00		Bathymetry data
100-200 meters	**Count**	27.00		*		*		11.00		11.00		Bathymetry data

	How measured?	*Total amount in Region*	*Total percent of Region*	*Amount in State Marine Reserves*	*Percent of Total in SMRs*	*Amount in State Marine Parks*	*Percent of Total in SMPs*	*Amount in State Marine Conservation Area*	*Percent of Total in SMCAs*	*Amount in all proposed MPAs in region*	*Percent of Total in existing MPAs*	*Spatial Data Source*
>200 meters	**Count**	4.00		*		*		2.00		2.00		Bathymetry data
Submarine canyon												
0-30 meters	**Area (mi^2)**	0.56	0.1%	0.01	2.12%	0.00	0.00%	0.00	0.00%	0.01	2.12%	Coarse-scale substrata (Greene et al 2004)
30-100 meters	**Area (mi^2)**	4.42	0.4%	0.00	0.00%	0.00	0.00%	0.52	11.81%	0.52	11.81%	Coarse-scale substrata (Greene et al 2004)
100-200 meters	**Area (mi^2)**	6.06	0.5%	0.00	0.00%	0.00	0.00%	1.27	20.96%	1.27	20.96%	Coarse-scale substrata (Greene et al 2004)
>200 meters	**Area (mi^2)**	42.77	3.8%	0.00	0.00%	0.00	0.00%	10.40	24.32%	10.40	24.32%	Coarse-scale substrata (Greene et al 2004)

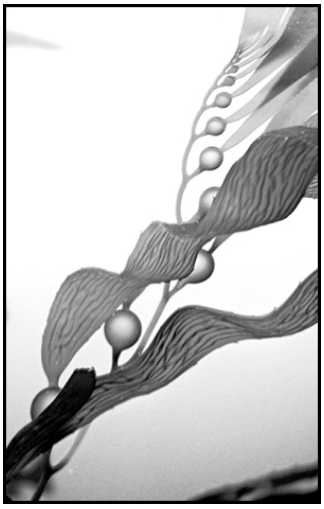
Pinnacle data extent is limited, asterick indicates either zero count or no data availble

Marine Life Protection Act Initiative
Central Coast Project

Proponent Rationale
Candidate MPA Package #2
November 21, 2005

An MPA Network for the Central Coast

Proponent Rationale
Package 2



Full text of proposal
& site descriptions

November 20, 2005
(Version 3)

Marine Protected Area Network
Central Coast Regional Stakeholder Group Package 2
Summary

Rationale

In developing this proposed network of Marine Protected Areas (MPAs), our starting point was the Marine Life Protection Act itself. This proposal is designed to directly address the fundamental problem that has been identified with California's existing system of marine protected areas: "the array of MPAs creates the illusion of protection while falling fall short of its potential to protect and conserve living marine life and habitat."[1] This proposal provides strategic, meaningful protection of California's ocean habitats and biodiversity, following the clear direction of the California legislature: "The MPA network and individual MPAs shall be of adequate size, number, type of protection, and location to ensure that each MPA meets its objectives and that the network as a whole meets the goals and guidelines of [the Act].)"[2]

This proposed MPA network, was designed with input from Regional Stakeholder Group (RSG) members, scientists, fishermen, SCUBA divers, educators and other community members, to:

- Meet both the letter and the spirit of the MLPA,
- Comply with the "best available science" as outlined in the Master Plan Framework (MPF) Scientific Guidelines;
- Collectively meet all of the Regional Goals and Objectives adopted for the Central Coast Study Area (CCSA);
- Fill the gaps identified in the Evaluation of Existing Central Coast Marine Protected areas; and
- Minimize socio-economic concerns while maximizing socio-economic benefits provided by MPAs.

This proposal includes: 21 State Marine Reserves (SMRs), 2 State Marine Parks (SMPs), and 12 State Marine Conservation Areas (SMCAs). Overall, this proposal includes approximately 14% of the CCSA in SMRs and 24% of the CCSA in MPAs. Our proposal emphasizes marine reserves because fully protected areas are necessary to provide comprehensive ecosystem protection and because the MLPA emphasizes marine reserves.[3] The scientific literature on MPAs typically calls for 20-30% of habitat to be protected within marine reserves to effectively protect biodiversity.[4] Our proposal focuses on protection of specific high value habitats such as persistent kelp beds, coastal marsh, eelgrass, submarine canyon, and rocky bottom at all depth ranges. This proposal also addresses the MLPA's goals related to improving research,

[1] Fish and Game Code (F&G Code) Section 2851 (a).
[2] F&G Code Section 2857 (c)(5).
[3] 2851 (f) "Marine life reserves are an essential element of an MPA system because they protection habitat and ecosystems, conserve biological diversity, provide a sanctuary for fish and other sea life.: F&G Code Section 2851 (f). "Marine life reserves in each bioregion shall encompass a representative variety of habitat types and communities, across a range of depths and environmental conditions." F&G Code Section 2857 (c)(2
[4] National Research Council. 2001. Marine Protected Areas: Tools for Sustaining Ocean Ecosystems. Washington, D.C. National Academy Press.

educational and recreational values. Furthermore, we have taken very seriously the interests of both consumptive and non-consumptive stakeholders. We have made extensive efforts both to ensure reasonable access to fishing grounds remains open under this proposal and to enhance traditional sites of non-consumptive use through additional protection. Specifically, in response to concerns raised by consumptive stakeholders regarding the importance of maintaining safe fishing opportunities close to harbors, we have not proposed MPA protection for most of the waters near Santa Cruz, Moss Landing, Morro Bay and Port San Luis harbors. Given the unique use patterns in the Monterey Peninsula we have taken a zoning approach in that sub-region.

Existing MPAs

This proposal follows the direction of the MLPA with regards to existing MPAs: "It is necessary to modify the existing collection of MPAs to ensure that they are designed and managed according to clear, conservation-based goals and guidelines that take full advantage of the multiple benefits that can be derived from the establishment of marine life reserves."[5] We have taken an adaptive management approach to existing MPAs: recommending improvements where appropriate and eliminating MPAs that do not provide significant ecological benefits. We propose modification to eight of the existing CCSA MPAs consistent with the recommendations contained in the Evaluation of Existing Central Coast MPAs. Changes are made to the Año Nuevo Special Closure, Elkhorn Slough SMR, Hopkins SMR, Pacific Grove SMCA, Carmel Bay SMCA, Point Lobos SMR, Julia Pfeiffer Burns SMCA, and Big Creek SMR, to improve the effectiveness of these MPAs and ensure better consistency with the MLPA, the MPF Scientific Guidelines and the Regional Goals and Objectives. We propose elimination of five of the existing MPAs in the CCSA: Atascadero Beach SMCA, Morro Beach SMCA, Pismo SMCA, Pismo-Oceano Beach SMCA, and Vandenberg SMR. According to the Evaluation of Existing Central Coast MPAs, four of these MPAs were designed to protect only one species (Pismo clams) and are not meeting their original objectives. Significantly, the original Master Plan Science Team also recommended eliminating these five existing MPAs.

Ecological Anchor Sites

This proposed MPA network is built around six critical areas we refer to as "Ecological Anchor Sites":

- Año Nuevo
- Point Lobos
- Monterey Canyon System
- Point Sur
- Piedras Blancas
- Point Conception

Marine reserves of adequate size, capturing high quality representative habitat, in each of these areas can meet many of the MLPA's ecological goals and guidelines at once, thus delivering maximum "bang for the buck." Scientists and stakeholders have identified these areas as having extremely high conservation values, unique oceanographic conditions, extensive species and

[5] F&G Code Section 2851 (h).

habitat diversity, and strong natural heritage values. These areas meet several of the identified "regional biodiversity significance" criteria:

- Areas where numerous habitats are found in close proximity and areas with unique combinations of habitats;
- Marine areas off headlands with adjacent upwelling centers, especially those with kelp forests and rocky reefs in retention areas in the lee of the upwelling center;
- Seabird colonies and marine mammal rookeries and haulouts; and
- Areas of high fish or seabird diversity and/or density.[6]

Because of their obvious biological importance, the original MLPA Master Plan Science Team identified these areas for SMR protection. Oceana has ranked these sites as having the highest relative ecological value.[7] The Natural Resources Defense Council has also identified these sites for SMR protection. Due to the incomparable natural heritage values of these anchor sites, the State Department of Parks and Recreation has identified several of them (Año Nuevo, Point Lobos, Point Sur, and Piedras Blancas) as warranting special consideration for improved protection.[8] We believe that the combination of ecological and natural heritage values provided by these anchor sites cannot easily be provided by other sites and that they should form the basis of any MPA Network for the Central Coast.

Habitat Requirements

This proposed system of MPAs also includes SMRs that replicate representative habitats across a range of depths (from rocky intertidal areas to deep sea canyons) [9], protect major estuaries (Elkhorn and Morro Bay), upwelling zones (Año Nuevo, Point Sur and Piedras Blancas)[10], submarine canyons (Portuguese Ledge, Point Lobos, Partington and Big Creek) [11], rocky reefs (Año Nuevo, Point Lobos, Piedras Blancas, etc) [12], pinnacles (Point Lobos, Point Sur, Partington, Big Creek, Piedras Blancas, Point Buchon) [13], larval retention zones[14] and other important habitat types. Where possible we have attempted to replicate habitats.

Size and Spacing of MPAs

This system meets the MPF network guidelines for maximum spacing between MPAs; in most cases the proposed MPA are no more than 30 miles apart. Because many of the MPAs are designed to meet goals and objectives that are not directly related to biological network

[6] Central Coast Regional Profile Final, September 19, 2005. Page 31.
[7] Oceana's ranking of sites was based on analysis of extensive biological datasets from both the Department of Fish and Game and the National Atmospheric and Oceanic Administration. See Oceana Central Coast Marine Life Protection Act Preliminary Proposal. October 15, 2005.
[8] Memo from Department of Parks and Recreation to John Kirlin on Marine Management Areas. Nov.8, 2005.
[9] F&G Code 2857 (c)(2).
[10] The MLPA calls out breeding and nursery areas as well as upwelling centers for protection: "special attention to marine breeding and spawning grounds, and available information on oceanographic features such as current patterns, upwelling zones…" F&G Code Section 2856 (a)(2)(B).
[11] F&G Code Section 2856 (a)(2)(A).
[12] Id.
[13] Id.
[14] F&G Code Section 2856 (a)(2 B).

considerations, in some cases, spacing is far closer than the minimum identified in the MPF. As for size, several MPAs extend out to the three-nautical-mile state waters boundary, and many also meet the absolute minimum size of three miles in coastal extent. As a result of our efforts to accommodate socio-economic concerns, very few, however, fall within the recommended size range of 6 to 12.5 miles in coastal extent needed to protect many fish species - only Point Lobos SMR, Piedras Blancas SMR, Point Conception SMR fall within the recommended range.

Education and Recreation Goals

This proposed network of MPAs includes areas that are important for education, public access, recreation, and research and monitoring. Three small intertidal MPAs (Baldwin Creek to Natural Bridges SMR, Opal Cliffs SMCA, and Estero Bluffs SMR) are included specifically to meet educational and research goals with little to no socio-economic impact. These MPAs are, however, unlikely to achieve a broad range of ecological goals due to their very limited size. Existing MPAs at Hopkins Marine Station and Big Creek are proposed for expansion to better meet scientific guidelines. Recognizing the importance of baseline data and ongoing scientific monitoring, we have been careful to site SMRs in areas where historic research data is available and ongoing monitoring may be provided by partner institutions (Baldwin Creek to Natural Bridges, Hopkins, Point Lobos, Big Creek, Ken Norris and Buchon).

This proposal also includes State Marine Parks (SMPs) designed to both enhance recreational uses and replicate habitats with different MPA status to facilitate comparison of fished and unfished sites for monitoring purposes. For example, in the Cambria and Purisima Point areas, SMPs are sited immediately adjacent to SMRs to allow such comparative studies. In other cases, combinations of MPAs have been proposed in an effort to either resolve user conflicts or to improve protection of an area while allowing some continued consumptive use. For example, in the Monterey Peninsula area we have proposed a detailed zoning plan designed to address very specific user conflicts while maintaining (and enhancing) access for all users.

Request for Guidance from Science Advisory Team

We look forward to guidance from the Science Advisory Team on several important siting issues. In working hard to address the concerns of consumptive stakeholders, this proposal includes MPAs where boundaries have been adjusted, levels of protection reduced, and locations of MPAs moved. We are concerned about the potential impact of these actions on the biological effectiveness of our proposed network. Specifically, we request scientific guidance on:

- The relative merits of fewer marine reserves that meet the MPF Scientific Guidelines for size (6-12.5 miles or shoreline length and 3 nm offshore extent) versus more, smaller reserves. This is especially relevant to our proposals for the Big Sur coast.
- The merits of our approach of focusing on providing high levels of protection to high quality/ high biodiversity habitat (with overall coverage below the typical 20% minimum in marine reserves suggested by the scientific literature) versus providing less extensive protection to more overall area containing less valuable habitat.
- The importance of protecting key forage species (anchovy, sardines, mackerel, herring, and squid) in MPAs designed to protect birds, marine mammals, and fish that prey on these smaller species.

Contents

Sub-Region I: Pigeon Point to Santa Cruz Marine Protected Areas

Overall goal for sub-region: To provide MPA protection in an area of the Central Coast Study Area that is currently unrepresented in MPAs. To protect seabird and marine mammal forage, roosting and breeding areas around Año Nuevo, to protect the range of habitats and depths that are representative of this region of the Study Area, to include within an SMR some of the productive waters of the Davenport Upwelling Cell, and to ensure MPA protection that complies with the Master Plan Framework (MPF) Scientific Guidelines.

Development and evolution of proposal: To achieve conservation goals in this region, the preferred alternative would be to site a SMR (extending out to 3 nm from shore) from Franklin Point to El Jarro Point. A SMR at that location would buffer important bird and marine mammal colonies, protect forage grounds for these species, include the estuarine reaches and freshwater plumes of Gazos, Waddell and Scotts Creeks, and comply with all of the ecosystem protection goals and objectives adopted by the RSG. This would also center the MPA around an existing state park with excellent opportunities for public education, existing interpretive facilities, and on-site enforcement at an area with high natural heritage values. There have been numerous proposals for a moderately sized SMR centered on Año Nuevo, including the Department of Fish and Game (DFG) Draft Initial Concepts (2001), the MPA Array submitted by the Natural Resource Defense Council (NRDC), and MPA proposals submitted by the Point Reyes Bird Observatory (PRBO). In addition, Oceana has identified this area as a "Very Important" ecological area. However, consumptive stakeholders have expressed strong concerns about the potential socio-economic impacts of such a proposal. We have worked extensively with consumptive interests (especially recreational fishermen and commercial squid fishermen) to craft the following proposal. Although more complex and less ideal than one large SMR centered at Año Nuevo, the combination of four MPAs described below is designed to achieve most of the conservation goals for this sub-region while minimizing socio-economic concerns that have been raised by the fishing community. We seek guidance from the Science Advisory Team regarding the effectiveness of this proposal at meeting conservation goals and objectives.

Pigeon Point State Marine Reserve

Overall Goal: The overall goal of this MPA is to protect ecosystem structure and processes in a SMR that meets the Master Plan Framework (MPF) Scientific Guidelines (regarding size and offshore extent) containing habitat that is representative of the subregion of the Central Coast Study Area north of Monterey Bay. This area supports diverse fish populations and other sea life, provides an important bird foraging area, and is located near pinniped haul-out and breeding areas.

Boundaries: Northern: Pigeon Point
Southern: Franklin Point
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: While not identified as the most ecologically significant part of this sub-region, and areas between Franklin Point and El Jarro Point are preferable, this area is representative of the habitat and species assemblages in the sub-region. It is within the top 20th percentile for seabird density.

Objective 2: Contains interspersed sand and rocky reef, kelp beds, and bluffs. Specifically includes wave cut rocky platforms that provide habitat at diverse tidal elevations (see Regional Profile p. 31 and map 2a). Note, such shoreline is not found in the Greyhound Rock SMCA.

Objective 3: The proposed SMR barely meets the minimal MPF scientific guidelines and may not be large enough to protect natural size and age structure of many fish populations.

Objective 4: As a SMR, this MPA should protect trophic structure. It is located in area with wide range of predator-prey relationships (bird and marine mammal forage area, great white shark forage area, etc). However, the small size of the SMR may limit its effectiveness at protecting the entire food web.

Objective 5: As a SMR, this MPA will help protect ecosystem structure and function. It may be too small to protect the full range of ecological processes, but in conjunction with the other MPAs proposed in the vicinity should help achieve this objective with respect to roosting, breeding, and forage activities of many species including species of concern.

Goal 2

Objective 1: This area is a historic site of colonies of marbled murrelet (endangered species) and important forage area for a number of listed bird and marine mammal species. This area has also been identified as an important area for black rockfish.

Objective 2: This SMR is located to the immediate north of the Davenport upwelling area and may be in the influence of this upwelling feature. This SMR may not be ideally located to protect larval sources but does include the area in the lee of the promontory at Pigeon Point, which may retain larvae. The proposed SMR may be too small to effectively retain large, mature females especially given the fishing pressure at nearby Año Nuevo Point.

Goal 3

Objective 1: The proposed SMR is adjacent to Pigeon Point Lighthouse State Park and Hostel. The area has good public access and provides visitation opportunities with excellent potential for public education through interpretive signage, etc.

Objective 2: This SMR could possibly serve as control site for comparison to the nearby fished Greyhound Rock SMCA. However, differing oceanographic conditions at the head and lee of Año Nuevo Point may make these two sites unsuitable for scientific replication purposes.

Goal 4

Objective 2: This SMR protects representative rocky, intertidal, kelp and sandy bottom habitats.

Goal 5

Objective 1: This site is designed specifically to minimize socio-economic impacts. This area receives far less fishing effort than adjacent areas to the north and south. This SMR leaves adjacent rocky reef areas preferred by recreational fishermen out of both Pillar Point and Santa Cruz harbor open to fishing. This area was also selected to reduce impacts to the squid fishery as it is less important to that fishery than areas in lee of Franklin Point and south of Point Año Nuevo through to Santa Cruz. The location of this SMR may not optimize positive benefits as much as an alternative site in the immediate vicinity of Año Nuevo which has incomparable non-consumptive values due to wildlife watching, etc.

Objective 3: The proposed SMR barely meets the MPF scientific guidelines regarding size but does comply with MPF guidelines recommending that MPAs extend offshore to the 3 nautical mile state limit (MPF p.40).

Design Considerations:

1: This site is designed specifically to minimize socio-economic impacts. It greatly reduces impacts to the squid fishery and recreational fishery (out of Santa Cruz). It is not an ideal site to serve conservation interests but is designed to adequately address conservation concerns in combination with the following three MPA proposals.
2: The offshore extent of this SMR is included in the non-trawl RCA and recreational RCA.
3: This SMR was sited specifically to avoid potential effort shift identified by consumptive users (potentially associated with a larger SMR proposal centered around Año Nuevo).
4: This area meets some of the design considerations found in the Nearshore Fishery Management Plan (NFMP) and Abalone Recovery and Management Plan (ARMP).
5: This site is within the Monterey Bay National Marine Sanctuary (MBNMS) and adjacent to State Park land.
6: The Pigeon Point Lighthouse and Hostel ensure “eyes on the water” at this site. In addition, much of the coastline of this SMR is visible from Highway 1.
7: State Park docents might be recruited to assist with monitoring and management at this site.
8. Pigeon Point has MARINe and PISCO monitoring sites. Franklin Point has a MARINe site.
9. The boundaries of this site are clear and easily visible from the water.

Año Nuevo Intertidal State Marine Reserve

Overall Goal: The overall goal of this small SMR is to provide a minimal buffer for a variety of seabird and marine mammal species that inhabit Año Nuevo Point and Island. The proposed SMR is designed to help protect sensitive and listed species from disturbance associated with fishing boats and fishing activities and to protect intertidal invertebrates. The proposed boundaries reflect the bare minimum that scientists and managers have identified as useful in reducing documented disturbance impacts to sensitive marine mammal and bird rookeries. It would not protect adjacent estuarine, pelagic and benthic habitat. Nor would the proposed SMR contain prime marine mammal and bird foraging area adjacent to important breeding colonies.

Boundaries: Expand the existing Año Nuevo Special Closure to ¼ mile from shore including bumping it out to surround the Island.

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: Año Nuevo Island and the surrounding islets and cliffs provide breeding and haul-out habitat for over 18,000 marine mammals and 9,000 seabirds, including the threatened Stellar sea lion, endangered brown pelican, and species of special concern rhinoceros auklet, Cassin's auklet and ashy storm-petrel. California Current endemics Brandt's cormorant and western gull also have large breeding colonies in this area. It is also home to more than 300 species of invertebrates including a high number of rare species. The proposed SMR is too small and too narrow to fully meet this objective for a wide range of species. However, it is designed to protect intertidal invertebrates (Año Nuevo is home to more than 300 species of invertebrates including a high number of rare species) as well as contribute to maintenance of bird and marine mammals by limiting disturbance to their roosting and breeding grounds.

Objective 2: MPA contains rocky intertidal, sandy beach and dunes used as haul-out areas, kelp beds and offshore rocks, Island and islets.

Goal 2

Objective 1: Site of colonies of marbled murrelet (endangered species) and several other listed bird and marine mammal species.

Objective 3: Site is designed as a compromise that allows access to traditional fishing grounds while providing minimal buffer to sensitive bird and marine mammal species.

Goal 3

Objective 1: Adjacent to Año Nuevo State Park. Area has excellent public access; high visitation rates, and provides excellent educational opportunities through existing docent program, interpretive signage, visitor center, etc.

Goal 4

Objective 2: Protects representative offshore rocks, Island, rocky, intertidal, kelp and sandy bottom habitats. SMR is within influence of Davenport upwelling feature.

Goal 5

Objective 2: Does NOT meet MPF scientific guidelines.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts. May not optimize positive benefits as much as an alternative larger SMR extending into deeper waters.
2: Much of area included in this SMR is already closed to some take as Special Closure.
3: Sited specifically to avoid potential effort shift identified by consumptive users (associated with larger SMR proposal at Año Nuevo).
4: May meet some of design criteria in ARMP, too small to meet design considerations in NFMP.
5: Within MBNMS and adjacent to State Park.
6: Adjacent to State Park with on-site ranger presence.
7: State park has active docent program. Subtidal monitoring difficult due to presence of great white sharks in area.
8: Long-term monitoring of birds, marine mammals, and white sharks occurs at this site. PISCO intertidal monitoring site.
9: Boundary proposed to be ¼ mile offshore, which may not facilitate ease of enforcement but is meant to provide some level of protection while minimizing socio-economic impacts.

Año Nuevo State Marine Conservation Area

Overall Goal: Protect forage base for birds, marine mammals and fish in the vicinity of Año Nuevo haul out and roosting areas.

Boundaries: Northern: See map.
Southern: See map.
Offshore Extent: 3nm

Fishing Regulations: SMCA: No squid or other small coastal pelagics (wetfish).

CCRSG Goals and Objectives:

Goal 1

Objective 1: Area contains high species diversity. Proposed SMCA is designed to protect species that are important forage base for other fish, birds and marine mammals. Fishing for species other than wetfish is allowed in this SMCA so MPA will not itself provide the full range of diversity.

Objective 2: SMCA contains rocky intertidal, sandy beach and bluffs and rocky reef interspersed with sand. This area is an example of "marine areas off headlands with adjacent upwelling centers, especially those with kelp forests and rocky reef in retention areas in the lee of the upwelling center"- such areas are identified in the Regional Profile as having regional biodiversity significance (Regional Profile p.31). However, since fishing for all species other than wetfish is allowed, the proposed SMCA will not protect communities associated with these habitats.

Objective 4: Not met in SMCA since fishing for most species is allowed.

Objective 5: Designed to protect forage base for fish, birds and marine mammals.

Goal 2

Objective 3: SMCA allows harvest of everything but forage species.

Goal 3

Objective 1: Adjacent to Año Nuevo State Park.

Goal 4

Objective 2: Includes representative kelp forest, shale reef, sandy bottom, but is not within SMR.

Goal 5

Objective 2: SMCA meets some of MPF guidelines.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts. Location may not optimize positive benefits as much as providing full SMR protection in larger configuration from Franklin Point to El Jarro Point.

2: Unknown.

3: Sited specifically to avoid potential effort shift identified by consumptive users (associated with larger SMR proposal at Año Nuevo).

5: Site is within the MBNMS and adjacent to state park land.
6: Site is adjacent to Año Nuevo State Park.
7: Potential use of State Park volunteers/docents.
8: Unknown.
9: Boundaries are fairly clear.

Greyhound Rock State Marine Conservation Area

Overall Goal: Protect multiple habitat types, including rocky cliffs, estuarine areas, intertidal zones, rocky reefs (shale beds) and other hard ocean substrates, sandy or soft ocean substrates, kelp forests within area identified as productivity and biodiversity hotspot in central California. Specifically, the goal of this MPA is to maximize protection for groundfish species within an upwelling plume. The specific focus of this SMCA is to provide protection for bottom fish and help rebuild depleted species.

Boundaries: Western: 122 degrees 19 minutes
Southern: El Jarro Point
Both western and southern boundaries terminate at State waters.

Fishing Regulations: No groundfish take.

CCRSG Goals and Objectives:

Goal 1

Objective 1: This SMCA includes nearshore rockfish complex (including most of the 19 NFMP species), lingcod, greenling, and cabezon. This area is within the top 20th for fish diversity, however only groundfish species would be protected within the proposed SMCA.

Objective 2: Area contains shale reef, rocky intertidal, sandy beach and bluffs. Includes Waddell Creek and Scotts Creek river mouths/freshwater plumes. This area is an example of "marine areas off headlands with adjacent upwelling centers, especially those with kelp forests and rocky reef in retention areas in the lee of the upwelling center"- such areas are identified in the Regional Profile as having regional biodiversity significance (Regional Profile p.31).

Objective 3: This area may be large enough to protect natural age structure of groundfish species associated with nearshore shale reef habitat.

Objective 4: Not met in SMCA since fishing for species other than groundfish, including forage species, is allowed.

Objective 5: Allowance of fishing for forage and other species may interfere with this objective.

Goal 2

Objective 1: Lingcod and most of the 19 NFMP species found in this area and will be protected by this MPA.

Objective 2: SMCA likely to serve as larval source, protects groundfish, sufficiently large to enhance reproductive capacity of nearshore groundfish species through retention of large mature individuals.

Objective 3: SMCA allows harvest of species other than groundfish.

Goal 3

Objective 1: Adjacent to Big Basin State Park. Area has public access beaches at Waddell Creek and Scotts Creek.

Goal 4

Objective 2: Area is proposed as a SMCA, therefore it does not meet with legal requirement that representative habitats be protected in SMRs.

Goal 5

Objective 2: SMCA meets some but not all of MPF Guidelines.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts. Location and level of protection (SMCA focused on groundfish only) may not optimize positive benefits as much as providing full SMR protection in larger configuration from Franklin Point to El Jarro Point.
2: Unknown.
3: Sited specifically to avoid potential effort shift identified by consumptive users (associated with larger SMR proposal at Año Nuevo).
4: Site appears to be consistent with NFMP siting considerations.
5: Site is within the MBNMS and adjacent to state park land.
6: Site is adjacent to Big Basin State Park and some of the shoreline of the SMCA is visible from Highway 1.
7: Potential use of Big Basin volunteers/docents.
8: Unknown.
9: Boundaries fairly clear.

Baldwin Creek to Natural Bridges Intertidal State Marine Reserve

Overall Goal: Protect intertidal habitat and communities and enhance research and educational values at site with high benthic invertebrate diversity adjacent to University marine laboratory and State parks.

Boundaries: Western boundary of Wilder Ranch State Park (mouth of Baldwin Creek, popularly known as "4-Mile") east to eastern boundary of Natural Bridges State Beach (corner of Auburn Avenue and West Cliff Drive), from mean high tide to -2.0' below mean lower low tide.

Fishing Regulations: No intertidal collection of marine life (fish, invertebrates, plants, algae).

CCRSG Goals and Objectives:

Goal 1

Objective 1: Although small in area and narrow SMR supports some of the larger mussel beds in central California, with a high diversity of invertebrate species; interspersed between the mussel beds are small pocket beaches that support sandy beach invertebrates and shore birds.

Objective 2: SMR contains mudstone platforms, sandy beaches, cliffs, and the mouths of creeks and freshwater lagoons.

Objective 3: SMR will protect natural sizes of mussels and associated species that live within this diverse habitat.

Objective 4: SMR will protect the natural trophic structure and food webs of a mussel bed habitat.

Objective 5: SMR will protect ecosystem structure, function, integrity, and ecological processes of a mussel bed habitat on shores of northern Monterey Bay over a large enough coastline that it can facilitate recovery of natural communities from disturbances.

Goal 2

Objective 3: SMR will allow mussels and associated species to grow to large sizes that can produce large numbers of larvae, which can recruit into other areas.

Objective 3: SMR is designed as compromise that allows access to traditional fishing offshore while providing protection to intertidal species.

Goal 3

Objective 1: SMR is adjacent to Wilder Ranch State Park, Long Marine Laboratory, and Natural Bridges State Beach. Area has excellent public access (except for about 1 km between Wilder and Long); visitation rate is very high at Natural Bridges, the second most visited site in central California. There are excellent educational opportunities through existing docent program, interpretive signage, and visitor centers.

Objective 2: There are replicate mussel beds at the Año Nuevo MPA and Hopkins SMR, as well as the proposed MPAs in Pacific Grove and south of Año Nuevo that differ mainly from each other in topography and substrate. Moreover, mussel beds occur

on comparable mudstone platforms north of the Terrace Point SMR that can be used for control areas.

Objective 3: Docent programs have existed through Natural Bridges State Beach on the mussel beds below Long Marine Lab property, as have research projects by faculty and students of all levels. The Monterey Bay National Marine Sanctuary has two LiMPETS sites in the SMR, and the site adjacent to Natural Bridges was monitoring by UCSC students between 1973 and 1997.

Objective 4: By protecting the intertidal species from human collection, they can reach natural adult sizes and ages to be experienced by people visiting the SMR.

Goal 4

Objective 2: Protects both representative mussel beds inhabiting intertidal mudstone platforms sand habitats in pocket beaches.

Goal 5

Objective 1: Long-term monitoring is being done by the PISCO program at a site below Long Marine Lab, and can be done at the two LiMPETS sites of the Monterey Bay National Marine Sanctuary. Site would provide far more conservation benefits as a full SMR extending offshore but has been proposed as an intertidal SMR to accommodate socio-economic concerns.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts on extractive users. Access is already regulated by State Park and University personnel, that effectively precludes collecting and shore fishing. SMR does not impact kelp harvesting or fishing offshore.

3: Because there is no fishing or collecting along this shore, there would be no shift of effort with the establishment of this SMR.

4: May meet some of design criteria in ARMP although abalones are not common on these mudstone platforms; too small to meet design considerations in NFMP.

5: The main users of this SMR are researchers from UCSC and non-consumptive tidepool visitors; formalizing what is already seen as a reserve by the users will be in the interests and needs of everyone involved, especially the rangers at Natural Bridges where most visitors enter.

6: The two State Parks, Long Marine Laboratory and Seymour Discovery Center all are concerned with protecting this intertidal region, and have research and educational programs consistent with the MLPA.

7: Adjacent to two State Parks with on-site presence of rangers and docents, and adjacent to Long Marine Laboratory and Seymour Discovery Center with a docent program; there are many "eyes on the water."

8: Long-term monitoring of invertebrate communities has been, and can continue to be done by students and docents, as well as volunteers using the MBNMS's two LiMPETS sites.

9: The two LiMPETS sites, as well as the intertidal PISCO site next to Long Marine Laboratory are very appropriate for monitoring studies.

10: The site is bounded by Wilder Ranch State Park on the west and Natural Bridges State Beach on the east, and the extent into the marine environment is bounded by the water's edge, making boundaries easy to mark and recognize.

Opal Cliffs Intertidal State Marine Conservation Area

Overall Goal: Protect extensive intertidal surfgrass habitat and communities and enhance non-extractive recreational values on a mudstone platform with one of the largest surfgrass beds in central California.

Boundaries: Soquel Point to Capitola Wharf, from mean high tide to -2.0' mean low tide.

Fishing Regulations: SMCA - No intertidal collection of invertebrates, plants, or algae; rod and reel shore fishing permitted from the shore (but not poke-pole fishing).

CCRSG Goals and Objectives:

Goal 1

Objective 1: Surfgrass habitat has a diverse assemblage of marine invertebrates and fishes, and serves as spawning ground for deep-sea midshipmen. The mudstone platform supports a diversity of boring bivalves that can only be extracted by habitat destruction. Moreover, situated in the gyre of the northeast corner of Monterey Bay, this SMCA has unusually high sea temperatures for central California, and is a habitat for species more typical of localities in southern California.

Objective 2: SMCA covers a relatively flat mudstone platform that is covered with a dense bed of surfgrass (*Phyllospadix* spp.), probably the largest surfgrass bed in central California.

Objective 4: SMCA maintains the trophic structure and food webs in a representative surfgrass bed.

Goal 2

Objective 4: Limited rod and reel fishing from shoreline rocks currently takes place when the tide is high; the fish caught are largely surf perch, which occur all along the coast. By permitting such fishing the SMCA will minimize the impact of recreational fishers, while protecting species characteristic of surfgrass beds. The other main extractive activity in the area is collecting clams (and illegally, boring clams) nestled within the surfgrass; this activity is destructive of this habitat, but not in areas where there are large boulders, such as at Point Santa Cruz, a nearby more popular clamming location.

Goal 3

Objective 1: The SMCA is adjacent to an unincorporated urban area between the cities of Santa Cruz and Capitola. It is a popular site for surfers and tidepoolers of all ages, with excellent public access and high visitation rates, providing excellent educational opportunities.

Objective 3: Area includes two MBNMS LiMPETS sites that can be utilized by high school students and other volunteers.

Goal 4

Objective 2: Protects representative intertidal mudstone reef covered by a surfgrass bed.

Goal 5

Objective 1: The proposed SMCA would not impact fishing activities other than invertebrate collection. This proposal does not include protection for wider range of species and habitats in an effort to reduce socio-economic impacts to local fishermen. Notably, the Soquel Point area is the only documented larval retention area in the Central Coast Study Region and an excellent potential site for full SMR. In spite of its high conservation value, we have not proposed a full MPA in this area in deference to concerns raised by the fishing community.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts, by allowing continued rod and reel fishing from the shore, and by not extending offshore where limited kelp cutting and recreational fishing from skiffs occurs.

3: Site with limited effort from consumptive users so there would be limited or no shifting (of clamming).

5: All users have been considered, both consumptive and non-consumptive recreational users (there is no commercial activity in the area).

6, 8, and 9: The MBNMS LiMPETS program, which uses volunteers, could continue to monitor the SMCA.

7: By being next to an urban area with easy access and visibility, and by being a popular surf and tidepooling site, there are plenty of "eyes on the water" to facilitate management, enforcement, and monitoring.

9: Boundary proposed is easily recognized by visitors to the shore and can be viewed from the cliff top to ease enforcement

Sub-Region II: Monterey Bay Region Marine Protected Areas

Overall goal for sub-region: To provide protection for important deepwater and estuarine habitats that are currently not represented or underrepresented in MPAs in the Central Coast Study Area. The existing Elkhorn Slough SMR is too small to meet scientific guidelines for MPA protection and is therefore recommended for expansion. The proposed deepwater sites (Soquel Canyon and Portuguese Ledge) are designed to protect two very high quality deepwater and submarine canyon habitats along with the species assemblages and ecosystem functions associated with these habitats. Notably, scientists that have monitored these sites have identified both sites as being depleted by historic fishing activities but excellent sites for recovery. The hard rock canyon wall at the eastern boundary of the proposed Portuguese Ledge SMR is designed to help replicate similar hard rock wall habitat found in the proposed Soquel Canyon SMCA. Because one site would remain open to limited pelagic fishing and spot prawn trapping, the combination of these two sites might allow for comparison of fished and unfished sites with some similar habitat. We are also proposing a SMCA that would prohibit bottom trawling throughout the Monterey Bay. Our recommendation is that this proposal be phased in coordination with a trawl vessel buyback effort that is currently underway.

Development and evolution of proposal: The proposal for an expanded Elkhorn SMR was developed after conversations with representatives from the Elkhorn Slough Estuarine Research Reserve and scientists who have performed long-term monitoring in this area. There is general agreement amongst RSG members to expand the SMR but disagreement regarding the exact boundary of the SMR. The deepwater sites were selected based on information from scientists who have explored the Monterey Submarine Canyon in submersibles and on data provided by Oceana. We have modified the DFG Initial Draft Concept maps based on additional mapping information provided by Oceana to try to minimize the amount of soft bottom habitat (where crabbing and other fishing activities occur) and maximize the amount of hard canyon wall in our proposal. Recognizing the importance of Soquel Canyon to both recreational and commercial salmon fisheries, we propose this area as a SMCA that would allow salmon fishing. We also propose allowing spot prawn trapping to continue in this SMCA.

Elkhorn Slough State Marine Reserve

Overall Goal: Protect the range of rare coastal wetland and estuarine habitats including eelgrass, salt marsh mudflats, and tidal channels. The proposed SMR would improve protection for important fish nursery grounds and roosting, forage, and haul-out areas for birds and marine mammals including many species of concern. Elkhorn Slough SMR would also provide a replicate for the MPAs proposed for Morro Bay Estuary. Large estuaries have been identified as areas of regional biodiversity significance in the Regional Profile and are called out for additional protection in the MPF: "Given the[ir] critical ecological roles and ecosystem functions, estuaries warrant special delineation as a critical California coastal habitat," (MPF at 43). Seagrass beds are specifically called out for protection in the MLPA itself.

Boundaries: Slough closed to fishing from inside the Highway 1 Bridge.

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: Area includes a wide range of representative estuarine habitats and high diversity of species. Protects northern anchovy, pacific herring, cabezon, halibut, sole, sand dabs, sharks, rays and many other fish species, along with a wide variety (559 different species) of invertebrates. Elkhorn Slough serves as breeding, forage and roosting area for over 250 species of birds including many migratory birds and has been designated as a Globally Important Bird Area. Protects critical nursery functions for several fish species. Provides haul-out and forage areas for marine mammals including southern sea otters.

Objective 2: Elkhorn Slough contains a diverse range of estuarine habitats.

Objective 3: Expanded SMR would help protect natural size, age structure and genetic diversity of resident invertebrate species. If SMR includes Vierra Mudflat, individuals in this area may able to grow to large adult size. Long-term monitoring suggests that harvest may be reducing native invertebrate size in this area of the Slough.

Objective 4: As SMR should protect trophic structure and food web of estuary. Proposed SMR is a significant improvement over the existing (very small) SMR in this respect. The Slough is important forage area for several species including listed birds and marine mammals.

Objective 5: Ecosystem functions of Elkhorn Slough are disturbed by a variety of human impacts including agricultural pollution, the Moss Landing Power Plan intake structure, and tidal erosion attributed to the creation of the Moss Landing Harbor. Protecting the area as a SMR will reduce the cumulative pressure on Slough resources contributed by fishing.

Goal 2

Objective 1: Elkhorn Slough serves as breeding, forage and roosting area for over 250 bird species birds including many migratory birds and listed species such as brown pelicans, Caspian terns, etc. The Slough also serves as an important forage area for California sea otter.

Objective 2: The Slough serves as nursery ground for many fish species.

Goal 3

Objective 1: The proposed SMR is adjacent to Moss Landing Marine Laboratory and the Monterey Bay Aquarium Research Institute as well as the Elkhorn Slough Estuarine Research Reserve and the Elkhorn Slough Foundation – all of which include research programs. Elkhorn Slough is traditionally a "Very Important" birding site, a kayaking destination and an important wildlife viewing area. There are currently several interpretive programs associated with the NERR. The Slough has exceptional value as an important ecotourism hub: birding, wildlife viewing, kayaking, etc.

Objective 2: Replicate for Morro Bay SMR.

Goal 4

Objective 1: Includes estuary.

Objective 2: Protects representative estuarine habitat.

Goal 5

Objective 1: Very little fishing occurs with the Elkhorn Slough itself and there are many opportunities to fish in the nearby area. Extending the SMR to include the Vierra mudflat might affect some historical bait collection. However, the value of the native invertebrates to the ecosystem outweighs their value as bait. Shorefishing opportunities exist at the nearby State Beaches and at Moss Landing Harbor. By protecting an important fish nursery and wildlife viewing area, the expanded Elkhorn Slough SMR will be expected to contribute to positive socio-economic impacts for all users.

Objective 2: The proposed SMR will bring protection of the Elkhorn Slough more into line with the MPF scientific guidelines on size.

Design Considerations:

1: Consumptive RSG members support an expanded SMR at this site. At the October 20, 2005 hotspots meeting, consumptive members of the RSG sought to retain access to the Vierra Mudflats adjacent to Highway 1 Bridge, which was identified as a "clamming area". Since the October 20, 2005 RSG meeting, we have learned that this mudflat is primarily used for bait collection. Collection of invertebrates for bait has reduced the average size of gaper clams and fat innkeeper worms at the Vierra Mudflats (according to monitoring data). Many Elkhorn Slough invertebrate species face severe competition from invasives thus protecting remaining populations from harvest is especially important. Since this mudflat provides the Slough's best habitat for the native invertebrate species being harvested, we believe the area should be protected. This should not result in a significant socio-economic impact since purchasing bait costs are nominal. Furthermore, the species at issue are also prey for southern sea otters. The value of these species as prey for the Slough's most watchable wildlife species (otters attract a large number of visitors to the area – visitors who rent kayaks or pay for trips on the Slough Safari), therefore protecting this area as a SMR would optimize the positive benefits.

2: Proposal expands an existing SMR.

3: Site is not expected to result in fishing effort shifts.

5: Many programs currently underway in the Slough to address water pollution, provide education and interpretive facilities, and monitoring of Slough species, habitats and ecosystem functions.

6: Much of land area adjacent to the Slough is in public ownership or owned/managed by land trusts. The NEERR and Elkhorn Slough Foundation provide staff and docents in the area that could assist with management and monitoring.

7: See above.

8. Many long-term monitoring studies have been done and are currently underway in the Slough including detailed habitat mapping, hydrological studies, extensive water quality sampling, and studies of species abundance and diversity. The slough's proximity to MLML and MBARI and the presence of the NERR and ESF ensure ongoing monitoring focus at this site.

9. Making the entire Slough a SMR would ease public recognition of the boundaries (and be easier than leaving open the first ¼ mile of the Slough as has been proposed).

Monterey Bay State Marine Conservation Area

Overall Goal: Overall goal is to protect species diversity, protect bottom structure and benthic communities in Monterey Bay by phasing out bottom trawling throughout the Bay.

Boundaries: Entire Monterey Bay.

Fishing Regulations: No bottom trawling. This proposal is to phase in a no-bottom trawling SMCA throughout the Monterey Bay in coordination with current effort to buy out trawlers. The SMCA would go into effect after the trawlers had agreed to a negotiated buy-out.

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: The Monterey Bay supports diverse communities of fish, invertebrates, seabirds, and marine mammals. Most of the Bay is within the top 20th percentile for fish and seabird density and the southern half is in the top 20th percentile for seabird diversity.

Objective 2: Monterey Bay contains a wide range of soft and hard substrate habitats across a range of depths. The Bay includes high relief submarine canyon habitat, sandy shelf, and areas with mixed bottom types. The Bay contains complex deep-water habitat that mixes varied depths and varied, high relief topography (rocky outcrops, vertical rock walls and soft sediment) capable of supporting a high diversity of fish and structure forming invertebrates.

Objective 3: The proposed SMCA should help restore natural size and age structure of depleted populations of fish targeted in (or caught as bycatch) in the trawl fishery.

Objective 4: This SMCA alone would not protect trophic structure.

Objective 5: Bottom trawling has been linked to reduction in species diversity and habitat complexity. The proposed SMCA would protect some ecosystem structure and functions, integrity and ecological processes associated benthic habitat.

Goal 2

Objective 1: Some of the Bay is designated as "Essential Fish Habitat" for groundfish complex.

Objective 3: Fishing for most species with varied gear types would remain open in much of the Bay.

Goal 3

Objective 1: In spite of water depth, this area is close to MBARI and has been the subject of monitoring studies using submersibles and is expected to the site of future monitoring.

Objective 2: Existing monitoring data and a history of submersible research that could provide the basis for before/after bottom trawling protection studies.

Objective 3: MBARI video has been used in web linked educational programs, possibility for linking deepwater monitoring at this site with classroom curricula.

Goal 4

Objective 1: Includes submarine canyon habitat but is not a SMR, therefore it does not meeting the MLPA's requirements for including habitats in SMR.

Objective 2: Does not meet MLPA requirements for representative habitat in SMR.

Goal 5

Objective 1: This proposal to establish a SMCA throughout the Monterey Bay that would prohibit bottom trawling would be PHASED IN after successful negotiation with the remaining trawlers in this area to "buy-out" the fleet. Our proposed SMCA would be coordinated with the buy-out effort that is currently underway and thus socio-economic concerns would be mitigated.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts by phasing in SMCA in coordination with trawl buy-out.
2: Much of the Bay has already been recognized as EFH and is included in the RCA.
5. Within MBNMS.
7: MBARI has monitoring studies in this area, a submarine cable monitoring array is about to be installed in the Bay.
9. Would improve ease of enforcement and public recognition.

Soquel Canyon State Marine Conservation Area

Overall Goal: The overall goal of this SMCA is to protect ecosystem structure and processes in representative submarine canyon habitat with hard rock wall, to protect high quality natural refugia and rockfish habitat, and to protect the full range of both benthic species and forage species characteristic of this habitat type. This area meets Regional Profile's description of area of regional biological significance based on high bathymetric complexity (MPF p.31). This site was proposed for protection in the Draft Initial Concepts, the Revised Draft Initial Concepts, and the NRDC MPA proposal. It has been identified by Oceana as a "Very Important" Area.

Boundaries: See Maps

Fishing Regulations: Recreational and commercial pelagic trolling for salmon and albacore only. Allow commercial spot prawn trapping.

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: This area contains one branch of the Monterey Submarine Canyon and specifically contains hard rock canyon walls that are particularly important ecologically and provide refugia for depleted rockfish species. Area is within top 20th percentile for fish and seabird density.

Objective 2: Contains range of depths, high relief submarine canyon habitat. Site contains complex deep-water habitat that mixes varied depths and varied, high relief topography (rocky outcrops, vertical rock walls and soft sediment) capable of supporting a high diversity of fish and structure-forming invertebrates. Depth range is 38-334 fathoms (70-611 meters).

Objective 3: SMCA should help restore natural size and age structure of depleted populations.

Objective 4: As SMCA limited to salmon and albacore fishing, trophic structure and food web will be largely protected. Allowing harvest of baitfish would not achieve this objective since these species serve as important forage for other species.

Objective 5: Area would protect ecosystem structure and functions, integrity and ecological processes associated with deep water submarine canyon habitats and communities and facilitate recovery of area that has been depleted by fishing. The proposed area serves as a natural refuge for rockfish as well as an important spawning area.

Goal 2

Objective 1: Protects "overfished" groundfish including bocaccio, canary, and yelloweye rockfish. Area is designated as "Essential Fish Habitat" for groundfish complex.

Objective 2: Ideal for retaining large, mature females. Submersible studies have found mature rockfish from depleted populations like canary, bocaccio and yelloweye in this area.

Objective 3: Salmon and albacore fishing allowed.

Goal 3

Objective 1: In spite of water depth, this area is close to MBARI and has been the subject of

monitoring studies using submersibles and is expected to be the site of future monitoring.

Objective 2: Replicates steep submarine canyon habitat of Partington Canyon complex, Point Sur Area. But this proposed area is an SMCA, so will not fully meet the MLPA guidelines for replication in SMRs. Has CenCOOS monitoring sites and a history of submersible research that could provide the basis for before/after protection studies in signature Pacific coast ocean submarine canyon habitat.

Objective 3: MBARI video has been used in web linked educational programs, possibility for linking deepwater monitoring at this site with classroom curricula.

Goal 4

Objective 1: Protects submarine canyon.

Objective 2: Protects deep-water rocky habitat at a variety of depth ranges.

Goal 5

Objective 1: SMCA would allow salmon and albacore fishing as well as spot prawn trapping thus greatly reducing socio-economic impacts particularly because the area is currently off-limits to rockfish fishing as part of the Rockfish Conservation Area.

Objective 2: Meets MPF scientific guidelines regarding protecting submarine canyon habitat.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts by allowing salmon and albacore trolling at important site for CPFV vessels. Also, this site is already included in proposed EFH area and under RCA closures, greatly reducing the socio-economic impacts associated with the MPA. Historic fishing activities at this site have already been reduced by other management measures. Furthermore, according to Map 8 of the Regional Profile, far more recreational private and rental boat fishing effort occurs in the vicinity of the main stem of the Monterey Canyon and off the Santa Cruz coast – areas where we have intentionally not proposed MPAs in an effort to reduce socio-economic concerns.

2: This site has already been recognized as EFH and is included in the RCA.

3: Due to existing closures in the area and since fishing effort is spread fairly well across the Monterey Bay, closing Soquel Canyon and Portuguese Ledge is not expected to result in significant additional effort shift (beyond what may have already occurred).

5: Within MBNMS. Siting MPA at Soquel Canyon rather than at the head of the main stem of the Monterey Canyon may result in reduced impacts associated with contaminated sediments that flow directly into the head of Monterey Canyon.

6: Site is offshore.

7: MBARI has monitoring studies in this area.

8: N/A

9: Square lines should facilitate ease of enforcement and public recognition.

Portuguese Ledge State Marine Reserve

Overall Goal: This site is designed to restore depleted bottom fish as well as to protect coupled high quality benthic habitat and pelagic offshore habitats. Area includes high quality habitat, in an upwelling zone, within an area that was historically abundant with fish but is now depleted. This site includes rocky reef interspersed with soft bottom substrate in a range of depths, from 48 to 112 fathoms (88-205 meters). It therefore fills a gap identified in the current system of MPAs by providing deepwater habitat—both rock and sand as well as some hard canyon wall which could help to replicate the proposed Soquel Canyon SMCA. According to the 2001 Draft Initial Concepts proposal, this site has been depleted of large groundfish but has excellent habitat, making it a prime candidate for restoration and recovery. This site was proposed for protection in the Draft Initial Concepts, revised Draft Initial Concepts, and the NRDC MPA proposal. It has been identified by Oceana as a "Very Important" Area.

Boundaries: See Maps

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: The proposed SMR contains diverse deepwater habitat including rocky reef ledges, interspersed with soft bottom and hard rock canyon walls of the Monterey Submarine Canyon that are particularly important ecologically and provide refugia for depleted rockfish species. The hard substrate near its western (State waters) boundary supports vulnerable corals and other structure forming invertebrates that warrant protection. Area is within top 20th percentile for seabird density and diversity and top 20th percentile for fish density.

Objective 2: Contains range of depths, high relief submarine canyon habitat. Site contains complex deep-water habitat that mixes varied depths and varied, high relief topography (rocky outcrops, vertical rock walls and soft sediment) capable of supporting a high diversity of fish and structure forming invertebrates.

Objective 3: Will help restore natural size and age structure of depleted populations.

Objective 4: As a SMR, trophic structure and food web will be protected. Allowing harvest of baitfish would not achieve this objective since these species serve as important forage for fish, birds, and marine mammals. Full SMR status is recommended at this site to comply with the MLPA's requirement that representative deepwater habitat be replicated in SMRs and due to evidence of gear entangled on the benthos structure at this site.

Objective 5: The proposed SMR would protect ecosystem structure and functions, integrity and ecological processes associated with deep water submarine canyon habitats and communities and facilitate recovery of area that has been depleted by fishing. The proposed area serves as a natural refuge for rockfish as well as an important spawning area.

Goal 2

Objective 1: SMR would protect "overfished" groundfish including bocaccio, canary, and yelloweye rockfish. Area is designated as "Essential Fish Habitat" for groundfish complex.

Objective 2: This is an ideal area to restore and retaining large, mature female rockfish. Submersible studies have found an absence of mature rockfish from depleted populations like canary, bocaccio and yelloweye in this area. This area is uniquely suited to help rebuild, enhance productivity of, and provide long-term protection for depleted groundfish and other vulnerable populations by creating a refugia for large bottom-dwelling fish.

Goal 3

Objective 1: In spite of water depth, this area is close to MBARI and has been the subject of submersible monitoring and is expected to the site of future monitoring.

Objective 2: Replicates steep submarine canyon habitat of Soquel Canyon. Has CenCOOS monitoring sites and a history of submersible research that could provide the basis for before/after protection studies in signature Pacific coast ocean habitat--submarine canyon.

Objective 3: MBARI video enhances possibility of web-linked educational programs, possibility for linking deepwater monitoring at this site with classroom curricula.

Goal 4

Objective 2: SMR would protect outstanding deepwater hard and sand habitat and portion of hard canyon wall.

Goal 5

Objective 2: Meets MPF scientific guidelines regarding protecting deepwater sites.

Design Considerations:

1: This site is designed specifically to minimize socio-economic impacts because is it located in an area that has already been closed to trawling under EFH and RCA designations.
2: This site has already been recognized as EFH and is included in the RCA.
3: Due to existing closures in the area and since fishing effort is spread fairly well across the Monterey Bay, closing Portuguese Ledge is not expected to result in significant additional effort shift (beyond what may have already occurred).
4. N/A
5: Within MBNMS.
6: Site is offshore.
7: MBARI has monitoring studies in this area.
8. N/A
9. Square lines should facilitate ease of public recognition.

Sub-Region III: Monterey Peninsula and Carmel Bay

Overall goal for sub-region: In this area of extraordinarily high non-consumptive as well as diverse consumptive use patterns, our goal is to balance conservation goals of protecting high quality habitat with public interest in both commercial and recreational activities. Those include consumptive activities, such as commercial fishing, kelp cutting, and recreational angling and spearfishing. They also include non-consumptive activities such as scuba diving, kayaking, and shoreline wildlife viewing. It is our goal in this region to maintain the viability of all consumptive activities while achieving restoration of the quality of non-consumptive activities lost in recent decades due to declining marine life populations. It is also our goal to respect grassroots and community interest in protecting areas of special interest. Finally, these proposals are designed to enhance scientific monitoring opportunities and to improve compliance (in the case of the Point Lobos SMR and SMCA) with the MPF Scientific Guidelines.

Development and evolution of proposal: The Monterey Peninsula and Carmel Bay sub-region MPAs were selected based on extensive discussions with a variety of consumptive and non-consumptives stakeholders. Given the concentrated and potentially conflicting use patterns along the Monterey Peninsula shore, we have proposed what is essentially a "zoning" approach in this area. The result is a series of small MPAs designed to achieve very specific goals, provide access to the range of users, and spatially separate conflicting uses. The mapping project for the entire sub-region was a collaborative effort between conservation and recreational diving representatives, as well as members of the Monterey Peninsula communities whose shores touch these areas. The Ricketts area, all of Carmel Bay, and the Point Lobos area have all been identified by Oceana as "Very Important" areas.

Edward F. Ricketts Reserve and Conservation Areas

Overall Goal: To provide a safe, significantly enhanced non-consumptive experiences of the marine environment by enhancing ecosystem services and marine life diversity and density in an area of traditionally high non-consumptive SCUBA diving. The proposed SMCA is designed specifically to accommodate the existing level of hand-harvested kelp that is utilized by local small mariculture businesses proximate to the MPA sites.

Boundaries: **Ed Ricketts SMR (Eastern Portion):** Northern/Eastern Boundary: The Monterey Coast Guard Breakwater and a line drawn due north from the tip of the Breakwater to a point over 60 foot depth.
Southern/Western Boundary: a line drawn directly offshore from the unnamed point on Cannery Row where the Charthouse Restaurant currently stands.
Offshore limit: 60-foot depth contour.
SMCA: Northern/Eastern Boundary: a line drawn directly offshore from the unnamed point on Cannery Row where the Charthouse Restaurant currently stands.
Offshore limit: 60-foot depth contour.
Southern/Western Boundary: Existing Hopkins Marine Reserve
Offshore limit: 60-foot depth contour.
SMR (Western Portion,): Northern/Eastern Boundary: The western bound of the existing Hopkins Marine Reserve.

Southern/Western Boundary: Lovers' Point and a line drawn directly offshore from the point to a point over 60-foot depth.
Offshore limit: 60-foot depth contour.

Fishing Regulations: SMR

SMCA: Kelp Cutting by hand only. We recommend regulations for Bed 220 to set total allowable take of kelp at 125% of current levels and allocate 90% of that take to existing abalone mariculture companies operating in the Monterey Harbor.

CCRSG Goals and Objectives:

Goal 1

Objective 1: Species of concern include southern sea otters (high-density area provides forage and shelter), pinnipeds (several haul-outs in the area). The area features the greatest fish diversity documented in the REEF database for the west coast of mainland US, due to confluence of northern and southern California species. Strong diversity here is corroborated in other biological databases.

Objective 2: Habitats protected include granitic rocky reef, kelp forest, and sand flat punctuated by rocky outcrops.

Objective 3: Will help restore natural size and age structure of depleted populations, though small size may limit effectiveness.

Objective 4: MPAs are likely too small to fully protect the food web.

Objective 5: The proposed expanded SMR might improve protection of ecosystem structure and functions, integrity and ecological processes but are likely too small to be effective at this objective.

Goal 2

Objective 1: Adults of seventeen of the 19 species in the NFMP have been observed. Juveniles of almost all of the NFMP rockfish species have also been observed at the Breakwater, demonstrating its nursery function. Juvenile and sub adult Bocaccio and Canary Rockfish, declared overfished stock by the Pacific Fishery Management Council, have also been observed (both historically and very recently), as well as juveniles of the deepwater rockfish species Half-banded and Stripetail. Two very productive fish nurseries bracket the proposed Ricketts SMR, Breakwater to the east and Lovers Cove to the West. Well over 90 species of finfish have been identified at the Breakwater.

Objective 2: This site will test the ability of a very small SMR to protect mature reproductive individuals. Expansion and buffering of Hopkins Marine Reserve will enhance the "reserve effect" currently provided there

Goal 3

Objective 1: This is the most visited portion of the entire Central Coast Study Area. The Breakwater/San Carlos Beach Park is the most popular diving beach on the West Coast. Ricketts SMR includes this dive site plus four additional popular SCUBA entry points. The proposed SMR receives 64,000 diver days per year and provides a uniquely accessible area for both research and education. Establishment of a SMR at this site would enhance the significant non-consumptive values of this site and alleviate a safety risk: Divers are currently

hooked by fisherman on the Breakwater at the documented rate of once every 19 days on average (the actual incident rate probably higher due to unreported events).

Objective 3: Replicates similar but smaller pinnacle structures nearby in Point Lobos SMR.

Objective 4: The site is perfectly situated to enhance recreational experience. High level of marine life protection will provide for recovery and enhanced viewing.

Goal 5

Objective 1: SMR boundary drawn intentionally to avoid impacts to squid fishery. The SMCA created specifically to allow continued kelp cutting in an area with persistent kelp beds very close to the businesses that rely on kelp. The SMCA was sited to include largest and most persistent kelp bed between the Breakwater and Point Joe. Siting the expanded SMR in an area with high non-consumptive use and visitation increases positive socio-economic impacts for these users. MPAs designed specifically to minimize negative socio-economic impacts through small size and avoidance of all but very shallow water. Wildlife watchers, divers, researchers and kayakers, and local tourism businesses would benefit from proposed SMR. Businesses serving those users benefit. SMR status precludes hook-and-line fishing from the Monterey Breakwater, preventing the possibility of diver injury from another hooking incident.

Objective 3: The proposed SMR is below the MPF scientific guidelines on size, this is a compromise to accommodate consumptive interests in this area. Connectivity to three other nearby (proposed) SMRs may mitigate loss of effectiveness due to small size.

Design Considerations:

1. See above Goal 5, Objective 1.
2: SMR boundary drawn intentionally to prevent impacting squid fishery.
3. Given the small size of the MPAs proposed, they are unlikely to result in serial depletion.
4. May meet some of the NFMP design criteria.
5: Within MBNMS, adjacent to State Park, includes Area of Special Biological Significance.
6: Offers diver and beachgoer “eyes on the water” with numerous interested businesses along the shore to facilitate management, monitoring and enforcement.
7: BAYNET volunteers have extensive docent program in this area. Overwhelming non-consumptive diver presence will make poaching socially unacceptable, and provide extensive volunteer enforcement help.
8: Many studies have been conducted in the Hopkins Reserve over the past decades.
9: Location relative to depth contour is easily determined via commonly used depth sounders. Bounds set on visual shore line-ups.

Hopkins State Marine Reserve (expansion of area)

Overall Goal: Expand existing small SMR at site to cover valued reef feature just beyond current Hopkins SMR. Enhance research and recreational use of that reef. In conjunction with other MPAs proposed in the immediate area, improve compatibility of Hopkins SMR with the MPF Scientific Guidelines.

Boundaries: SMR: Northern Boundary: existing line
Southern Boundary: existing line
Offshore limit: 60' except for a triangular expansion drawn to cover "Hopkins Deep Reef". See maps drawn at RSG on 11/10/05.

Fishing Regulations: SMR. Anchoring of vessels including recreational and commercial dive boats specifically permitted deeper than 60'

CCRSG Goals and Objectives: Same as for Ricketts Reserve, above.

Goal 3
Objective 1: SMR protection of small, deeper reef structure will provide additional opportunities to study depth strata not currently included in Hopkins Reserve. Proximity to Hopkins Marine Station affords ease of access for students and scientists.

Design Considerations: Same as for Ricketts SMR, above.

Pacific Grove Marine Gardens SMR and SMCA

Overall Goal: Provide enhanced recreational experiences (both consumptive and non-consumptive) of the marine environment. Improve protection of existing MPA and respond to community concerns regarding protection of Pacific Grove intertidal and nearshore waters.

Boundaries:

SMCA: Northern/Eastern Boundary: Lovers' Point and a line drawn directly offshore from the point to a point over 60-foot depth.
Southern/Western Boundary: A line drawn offshore from the point where Esplanade Avenue meets Ocean View Avenue in Pacific Grove.
Offshore limit: 60-foot depth contour.
SMR: Northern/Eastern Boundary: Same as Western Bound of the SMCA; these areas area adjacent.
Southern/Western Boundary: a line drawn directly offshore from the Pacific Grove City limits at Moss Beach.
Offshore limit: 60-foot depth contour.

Regulations: SMCA: Recreational fishing allowed, including angling from shore or boat as well as spearfishing. No intertidal collecting, no poke-pole fishing. Kelp cutting by hand only. We strongly recommend regulations for Bed 220 to set total allowable take of kelp at 125% of current levels and allocate 90% of that take to existing abalone mariculture companies operating in the Monterey Harbor.
SMR (West of Esplanade Street to Moss Beach).

CCRSG Goals and Objectives

Goal 1

Objective 1: Species of concern include southern sea otters (high-density area provides forage and shelter). The area features high fish diversity, and the kelp beds function as rockfish nurseries. Includes diverse intertidal invertebrate communities.

Objective 2: Habitats protected include granitic rocky reef including some steep relief, kelp forest, tidepools, and sand flat punctuated by rocky outcrops. Adults of most of the 19 species in the Nearshore Finfish Fishery Management Plan (NFFMP) have been observed. demonstrating its nursery function.

Goal 2

Objective 1: The area immediately west of the Esplanade Street line affords high quality habitat with some shelter from weather. The area is largely depleted of groundfish, so there is excellent potential for restoration. However, the level of protection provided in these very small MPAs might not be sufficient to restore species of concern.

Objective 2: This site will test the ability of a very small SMR to protect mature reproductive individuals. Further, connectivity across a small fished area to the nearby Hopkins Marine Reserve and Ricketts Reserve may enhance the "reserve effect."

Goal 3

Objective 1: The Pacific Grove shore attracts a large number of visitors and residents engaging in a variety of activities that depend on or are enhanced by marine wildlife. The shoreline including the recreation path draw residents and visitors who gaze into the kelp beds looking for marine mammals, seabirds, and other wildlife who depend on the health of this ecosystem. SCUBA divers enter the water here from both beaches and boats.

Objective 2: This combination of MPAs places shallow water reserves straddling an area open to recreational fishing, all within walking distance from Hopkins Marine Station. Opportunities to do controlled comparison studies will be superb. In addition, new reserves will be placed alongside, and a short distance from, the existing Hopkins Reserve, creating further opportunities for monitoring of restoration, and measurement of the effects of augmenting the size of the Hopkins Reserve.

Objective 3: Placement of these MPAs in proximity to Hopkins Marine Station, the Monterey Aquarium, and the educational institutions in Monterey and PG, along with BAYNET volunteers, will probably produce more research, educational, study and volunteer activity than for any other MPAs in the Central Coast. In fact, it will be important to make sure parallel monitoring in other SMRs, that meet the SAT size guidelines, is conducted to produce appropriate comparison data.

Objective 4: The site is perfectly situated to enhance recreational experience. High level of marine life protection will provide for recovery and enhanced viewing.

Goal 5

Objective 1: SMR and SMCA boundaries match existing the existing SMCA at this site that excludes commercial fishing. Therefore the proposed MPAs will not impact commercial fishing. The proposed new SMCA is designed specifically to provide opportunities for recreational fishing and kelp cutting. Siting SMR in area with high non-consumptive use, visitation, and community value increases positive socio-economic impacts for these users. Positive response to strong local desire for SMR may preclude a legal confrontation between the State and the City of Pacific Grove.

Objective 3: The proposed SMR is below MPF scientific guidelines on size, this is a compromise to accommodate consumptive interests in this area. Connectivity to three other nearby (proposed) SMRs may mitigate loss of effectiveness due to small size.

Design Considerations:

1. MPAs designed specifically to minimize negative socio-economic impacts through small size and avoidance of all but very shallow water. Site optimizes socio-economic benefits by enhancing recreational and non-consumptive values in area with high recreational diving and wildlife viewing values. A positive social value will be realized in bringing peace to the long-standing. Local businesses benefit from enhanced reputation and destination value of area.

3: SMR creates no change for commercial fisheries. Recreational fishing opportunities provided in SMCA sited to coincide with peak spearfishing sites in this area.

5: Within MBNMS.

6: Offers diver and beachgoer “eyes on the water” with numerous concerned residents along the shore to facilitate management, monitoring and enforcement. Close to Hopkins Marine Station.

7: BAYNET volunteers have extensive docent program. Divers will likely provide enforcement and monitoring assistance as well.
9: Location relative to depth contour is easily determined via commonly used depth sounders. Bounds set on visual shore line-ups.

Carmel Bay SMCA

Overall Goal: Provide enhanced recreational consumptive and non-consumptive experience through an MPA that does not allow commercial harvest of anything other than kelp.

Boundaries: Existing except as modified by Carmel Pinnacles and expanded Point Lobos SMR.

Fishing Regulations: Existing SMCA allows recreational harvest of finfish and commercial harvest of kelp.

CCRSG Goals and Objectives:

Goal 3
Objective 1: Popular dive area, for both spearfishermen and nonconsumptive divers. Accessed by commercial dive boats operating out of Monterey harbor. Also utilized by CPFV vessels and skiffs.

Goal 5
Objective 1: SMCA optimizes socio-economic benefits associated with consumptive recreational uses.

Design Considerations:
1: SMCA provides recreational and non-consumptive value to a range of users including spear fishermen, shore and kayak divers, skiff fishermen and commercial dive boat fleet operating from Monterey Harbor.
5: Within MBNMS, adjacent to Area of Special Biological Significance.
6: Offers diver and resident "eyes on the water" to facilitate management, monitoring and enforcement.
9: Bounds set on visual shore line-ups and straight lines.

Carmel Pinnacles SMR

Overall Goal: Simultaneously provide restoration and protection of marine populations in superior habitat, while enhancing non-consumptive experience.

Boundaries: Seaward Boundary: A line from the point of land beneath the "White Castle House" in Pebble Beach to a point offshore, and then on a line toward Arrowhead point, but turning due north to touch land at the Stillwater Cove Jetty. The remainder of the Carmel Bay SMCA would remain unchanged.

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: Includes areas of both Bull *(Nereocystis)* and Giant Kelp *(Macrocystis)*. These different primary producer species host significantly different assemblages of resident invertebrate species, yielding very high diversity. Includes areas lush with slow-growing California Hydrocoral *(Stylaster californicus).*

Objective 2: As drawn, this SMR includes the largest pinnacle structure in the Monterey and Carmel Bays, plus similarly high-relief vertical rocky habitat in shallower nearshore water. Includes areas of both Bull *(Nereocystis)* and Giant Kelp *(Macrocystis).*

Objective 3: May help restore natural size and age structure of depleted populations, though small size may limit effectiveness.

Goal 2

Objective 1: This area has reduced fish populations but high quality habitat. SMR status may help enhance recovery of ground fish at this site. Includes part of the leopard shark breeding area in Stillwater Cove. DFG data indicates presence of canary rockfish in this area.

Objective 2: SMR may help to restore and retain large, mature groundfish. High diversity of invertebrates is present. This area may be well suited to helping to rebuild, enhance productivity of, and provide long-term protection for depleted groundfish and other vulnerable populations by creating a refuge for large bottom-dwelling fish. Small size of SMR may reduce effectiveness.

Goal 3

Objective 1: Popular non-consumptive dive area, especially for the six commercial dive boats operating out of Monterey harbor. Moss Landing Marine Laboratory has long-term intertidal and subtidal data and ongoing monitoring studies in Stillwater Cove.

Objective 2: This site replicates SMR status for the smaller but similar pinnacles in nearby Point Lobos SMR.

Objective 3: Scientific studies are ongoing in Stillwater Cove. High recreational diver use and appreciation make volunteer projects likely.

Objective 4: The site is well situated to enhance recreational experience. SMR status will provide for recovery and enhanced viewing of marine wildlife.

Goal 4

Objective 1: This site includes the largest and best pinnacle complex between the north end of the Central Coast Project Area and Point Lobos.

Objective 2: As drawn, this SMR includes pinnacles in water of moderate depth, and similarly high relief topography in progressively shallower water reaching shore.

Goal 5

Objective 1: SMR boundary drawn intentionally to prevent impacting squid fishery and spot prawn trapping. Shore access point in Stillwater Cove left outside of SMR bounds at the request of spearfishing interests.

Objective 3: SMR is below MPF scientific guidelines on size, this is a compromise to accommodate consumptive interests in this area including party boats, live fish fishing, and spearfishers. Connectivity to three other nearby (proposed) SMRs may mitigate loss of effectiveness due to small size.

Design Considerations:

1: SMR boundary drawn very carefully to prevent impacting spot prawn fishery or squid fisheries. Size of area reduced twice in RSG process to accommodate recreational and live fish fishing. This SMR is now at minimum size to achieve conservation and recreational goals. Site optimizes socio-economic benefits by enhancing recreational and non-consumptive value to commercial dive boat fleet operating from Monterey Harbor.

5: Within MBNMS, adjacent to Area of Special Biological Significance.

6: Offers diver and resident “eyes on the water” to facilitate management, monitoring and enforcement.

8: MLML has on-going subtidal and intertidal monitoring sites in Stillwater Cove.

9: Bounds set on visual shore line-ups and straight lines.

Point Lobos State Marine Reserve and State Marine Conservation Area

Overall Goal: Expand existing small SMR at site with exceptionally high species and habitat diversity to ensure better compliance with the MPF Scientific Guidance and improve protection. Enhance non-consumptive interests at site with high natural heritage values. Providing SMCA buffer to proposed SMR extending some level of protection into deeper water habitat, protect benthic species and most forage species, while allowing continuation of salmon fishing and spot prawn fishery in an effort to minimize socio-economic impacts.

Boundaries: **SMR:** Northern Boundary: line drawn due west from "an unnamed point" on the northern end of Monastery Beach
Southern Boundary: line drawn due west from the Malpaso Creek Bridge
Offshore limit: straight north to south line near the 70-100 fathom line
SMCA: Offshore of proposed SMR and to 3 nm limit.

Fishing Regulations: SMR
SMCA: Salmon and spot prawn only.
Note: multiple stakeholders have supported the request that the Department of Parks and Recreation continue to manage the area within the current bounds of Point Lobos, and that the newly added area be managed by DFG. We recommend taking full advantage of the presence of State Parks Rangers to assist DFG in enforcing its regulations here.

CCRSG Goals and Objectives:

Goal 1

Objective 1: Species of concern include southern sea otters (high-density area provides forage and shelter), marine mammals (several haul-outs and a rookeries in the area), seabird colonies: over 200 species have been identified at Point Lobos and the area is in the top 20th percentile for seabird density and diversity. The area also provides habitat for a high diversity of fish and invertebrates including large rockfishes, lingcod, cabezon and greenlings and is in the top 20th percentile for fish density.

Objective 2: Habitats protected include granitic rocky reef, kelp forest, surfgrass, pinnacles, sandy and rocky intertidal, and submarine canyon head. This is one of only a few sites that extends protection across all of the depth ranges identified by the SAT: 0-30 m, 30-100m, 100-200 m, >200 m.

Objective 3: Will help restore natural size and age structure of depleted populations.

Objective 4: As a SMR, this site should protect the trophic structure and food web.

Objective 5: The proposed expanded SMR would improve protection of ecosystem structure and functions, integrity and ecological processes associated with a wide range of habitats. SMCA buffer will help SMR provide this protection.

Goal 2

Objective 1: Protects most of the 19 NFMP species, sea otters, seabirds.

Objective 2: Ideal area to restore and retaining large, mature females. Submersible studies have found absence of mature rockfish from depleted populations like canary, bocaccio and yellow eye in this area. This area is uniquely suited to helping to rebuild,

enhance productivity of, and provide long-term protection for depleted groundfish and other vulnerable populations by creating a refugia for large bottom-dwelling fish.

Objective 3: Fishing for salmon and spot prawns allowed in SMCA.

Goal 3

Objective 1: In spite of water depth, this area is close to MBARI and has been the subject of submersible monitoring and is expected to the site of future monitoring.

Objective 3: This site has already been the subject of cooperative research projects including high school students, divers, etc. Proximity to MBARI makes this a good site for potential web-linked educational programs to be used in classroom curricula.

Goal 4

Objective 1: Contains pinnacles and submarine canyon.

Objective 2: Protects outstanding representative intertidal, kelp forest and deep-water habitats.

Goal 5

Objective 1: SMR boundary drawn intentionally to prevent impacting spot prawn fishery. Expanding existing SMR reduces socio-economic impacts as compared to establishing a new SMR in the vicinity that meets the SAT Guidelines. Allowing recreational fishing to continue in the adjacent Carmel Bay as well as south of Maltase Creek and maintaining areas open to commercial fishing from Cypress Point to Point Joe and south of Malpaso Creek to Point Sur also reduces socio-economic impacts. Siting expanded SMR in area with high non-consumptive use and visitation increases positive socio-economic impacts for these users. Rather than extending SMR out to deep water, the area is buffered by a SMCA that extends some level of protection out to the 3 nautical mile limit. Allowing salmon fishing and spot prawn traps in this SMCA further minimizes socio-economic impacts associated with this MPA.

Objective 2: Expanded SMR meets MPF scientific guidelines on size, combined with SMCA meets guidelines regarding extending protection from intertidal to state limits.

Design Considerations:

1: Site is designed specifically to minimize socio-economic impacts because it builds on existing protected area and intentionally keeps areas nearby that are used by the name fisheries that could be displaced by expanded SMR open. SMR boundary drawn intentionally to prevent impacting spot prawn fishery. SMCA buffer allows salmon and spot prawn fishing. Site optimizes socio-economic benefits by enhancing recreational and non-consumptive values in area with especially high natural heritage value. Wildlife watchers, divers, researchers and kayakers would benefit from proposed SMR.

4: Meets the design considerations in the NFMP and the ARMP.

5: Within MBNMS, adjacent to State Park, includes Area of Special Biological Significance.

6: Offers adjacent State Park “eyes on the water” with on-site rangers to facilitate management, monitoring and enforcement.

7. Point Lobos has extensive docent program providing large number of volunteers to assist with management needs.

8. Point Lobos is site of several on-going, long-term monitoring studies as well as historic research.
9. Boundaries would be very clear.

Sub-Region IV: Big Sur Coast Region Marine Protected Areas

Overall goal for sub-region: To protect high quality habitat including the unique Point Sur Shelf and Partington Canyon features as well as representative rocky intertidal, rocky reef, sandy bottom, kelp forest and submarine canyon habitats characteristic of the Big Sur coastline. The sites were selected to ensure replicability for scientific monitoring purposes and designed to allow fishing to continue in many prime locations.

Development and evolution of proposal: Some of the Big Sur coast sites were identified with the assistance of scientists and recreational users and designed to protect unique and special places and cannot be substituted for alternative sites (Point Sur and Pfeiffer). No MPAs have been proposed at Lopez Point or at Cape San Martin. These are both important fishing areas (party boat favorite spots) that have been kept open to ensure good fishing opportunities remain open in the vicinity of areas proposed for protection.

Point Sur State Marine Reserve

Overall Goal: Proposed SMR is designed to protect a variety of unique high quality habitats and oceanographic conditions in an area that has historically received relatively limited fishing effort. This area qualifies as an area with a "unique combination of habitats types" and is an example of "marine areas off headlands with adjacent upwelling centers, especially those with kelp forests and rocky reef in retention areas in the lee of the upwelling center." Such areas are identified in the Regional Profile as having regional biodiversity significance (Regional Profile p.31). This site was proposed for protection in the Draft Initial Concepts and NRDC's MPA Proposal. Point Sur has been identified by Oceana as a "Very Important" Area.

Boundaries: Northern: line due west of Point Sur
Southern: line due west of Cooper Point
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Big Sur bench houses large and diverse assemblages of adult rockfish in both the large nearshore kelp bed and in deeper water areas near the Sur submarine canyon head. This area also includes a diverse range of invertebrate species and provides habitat for female sea otters. Area is within top 20th percentile for fish density and diversity and for seabird diversity. Contains steelhead habitat at Big Sur River estuary.

Objective 2: This site contains an incomparable example of a mosaic of diverse high quality habitats. The proposed SMR contains rocky reef, soft bottom, and extensive deep- and shallow-water reef with large hydrocoral trees, a submarine canyon head and deeper canyon habitat making up a mosaic of high relief habitats, and rocky intertidal interspersed with sand. It contains the most persistent and largest kelp bed in California. Point Sur is an upwelling area with

unique gyre effects (currents carry water and larvae both north and south from the point). The proposed SMR contains rocky reef across a variety of depth ranges (0-30 m, 30-100 m, 100-200 m) and includes the head of Sur Canyon. "Rocky reefs in distinct oceanographic settings are different habitats," (MPF at 44). The proposed SMR also includes large freshwater plumes and small estuary at the Big Sur River mouth. This site provides ecological connections to significant offshore features (greater Sur Canyon and Sur Platform).

Objective 3: Proposed SMR will help protect natural size and age structure of a wide range of species including depleted populations.

Objective 4: As SMR, trophic structure and food web will be protected. Allowing harvest of baitfish would not achieve this Objective since these species serve as important forage. SMR at this site would provide representative deepwater habitat in SMR as required by the MLPA.

Objective 5: Area would protect an exceptional range of ecosystem structure and functions, integrity and ecological processes associated with a high quality rocky reef and kelp forest habitat that is in good condition. Contains upwelling source and likely larval retention area in lee of major promontory (Point Sur).

Goal 2

Objective 1: Protects "overfished" groundfish including cowcod, goldeneye, boccacio, lingcod, also includes the 19 NFMP species, and listed steelhead and salmon.

Objective 2: Ideal area to help seed the Big Sur Coast due to upwelling cell. This area is uniquely suited to helping to maintain and enhance productivity of whole sub region along the Big Sur Coast.

Goal 3

Objective 3: Adjacent to Andrew Molera State Park which has a long term monitoring site. Baseline data on fish abundance since the 1970's. MBARI video at Sur Canyon has been used in web linked educational programs, possibility for linking deepwater monitoring at this site with classroom curricula.

Goal 4

Objective 1: SMR would protect pinnacles, small estuary, head of Sur submarine canyon, and area with unique oceanographic conditions (gyre effect caused by currents).

Objective 2: Protects exceptionally large and persistent kelp forest, hydrocoral, extensive rock reefs in both deep and shallow water, and interspersed soft bottom. SMA would include freshwater plume at river mouths, wide sandy beach, and shale ledges at canyon head.

Goal 5

Objective 1: Site would primarily impact recreational CPFV fishery and livefish fishery. However, this site receives very limited fishing effort as compared to other areas that are less remote. Given the area's exceptionally high conservation value and unique ecological characteristics and its comparatively limited economic value, protecting it in a SMR would optimize positive socio-economic values. This is particularly true given the area's high potential to reseed the Big Sur coast with larvae.

Objective 2: The proposed SMR meets the MPF scientific guidelines regarding protecting submarine canyon habitat and deepwater sites.

Design Considerations:
1: This site is designed specifically to minimize socio-economic impacts because is it located far from port, is subject to high winds, and is therefore in an area that has historically received limited fishing pressure. While fishing is lighter here than on much of the coast, rockfish found here are part of depleted populations, and species like hydrocorals are fragile. Site has exceptional natural heritage value.
2: Deepwater portions of this SMR are within the non-trawl and recreational RCAs.
3: This is a remote site that currently receives minimal fishing effort. Comparable habitat is closer and available north and south for fishing. A SMR in this area would not result in significant shift in effort.
4: Proposed SMR meets design criteria of the NFMP & ARMP
5: Within MBNMS.
6: Adjacent to Andrew Molera State Park with on-site ranger as "eyes on the water."
7: Volunteers at Point Sur Lighthouse could potentially be recruited to assist with MPA monitoring and enforcement.
8: Baseline monitoring on fish abundance since the 1970's available. Long-term monitoring sites within the proposed SMR including MARINe site and PISCO intertidal and subtidal sites. CCAMP water quality monitoring site on the Big Sur River.
9: Boundaries are located at major points and are very clear.

Partington State Marine Reserve and State Marine Conservation Area

Overall Goal: Protect deepwater and submarine canyon habitat and benthic species of concern. Provide replicate for Big Creek SMR. This site has been identified by Oceana as a "Very Important" Area.

Boundaries SMR: **Northern: Grimes Point**
Southern: Anderson Canyon
Offshore Extent: 1 nautical mile
Boundaries SMCA: Northern: Grimes Point
Southern: Anderson Canyon
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR
SMCA: salmon and spot prawn only

CCRSG Goals and Objectives:

Goal 1

Objective 1: Captures Partington deep submarine canyon head that likely shelters benthic species of concern. Protects diverse range of nearshore rockfish species, rocky reef species, and intertidal invertebrates. Contains the 19 NFMP species, and most of the species identified as "likely to benefit" from MPAs.

Objective 2: This would be one of the deepest water MPAs in Central California. Represents habitat across a wide range of depths. Intertidal to 30 meters, 30-100 meter rocky reef, 100-200 meters rocky reef. Submarine canyon head, ledges, interspersed with sand, hard and soft bottom. This site is located between upwelling centers to the north (Point Sur) and south (Cape San Martin). Includes important and spectacular natural heritage site within existing underwater marine park.

Objective 3: Maintains size and age structure of benthic fish by capturing full depth range of benthic species in SMR with SMCA buffer.

Objective 4: Located between upwelling centers.

Objective 5: Offers rare, deep rocky reef habitat and submarine canyon close to shore.

Goal 2

Objective 1: Site contains most of the 19 NFMP species: cowcod, goldeneye, lingcod, and boccacio, red and black abalone.

Objective 2: Larvae settlement area between upwelling centers to the north and south. SMR expected to protect large mature individuals of resident species.

Goal 3

Objective 1: Adjacent to Julia Pfeiffer Burns State Park and traditional site of non-consumptive
recreation (diving).

Objective 2: SMR could provide replicate of Big Creek SMR.

Objective 3: This is potentially a good site for collaborative monitoring using volunteer divers.

Objective 4: Enhanced visitor experience could be provided by expanded habitat protection

and protection of natural size and age structure since area includes dive sites.

Goal 4

Objective 1: Protects head of Partington submarine canyon. The Julia Pfeiffer Burns SMCA has been studied as a potential underwater park because of its exceptional habitat, biodiversity and scenic features; it received the top rating for scenic value.

Objective 2: Protects range of high quality representative habitats including: intertidal to 30 meters, 30-100 meter rocky reef, 100-200 meters rocky reef and canyon walls.

Goal 5

Objective 1: Expands existing site, adjacent to Julie Pfeiffer Burns State Park. SMCA allows spot prawn and salmon fishing from 1-3 nm from shore to minimize socio-economic impacts. Leaves area from Grimes Point to Cooper Point and from Anderson Canyon to Rat Creek open to fishing to maintain opportunities for nearshore rockfish and CPFV vessels in the immediate vicinity.

Objective 3: Expansion of existing MPA to more closely approximates MPF guidance on sizing and protection. Provides buffer of SMCA into deep water, ensuing some level of protection into offshore extent as recommended in MPF.

Design Considerations:

1: Siting SMR here would minimize socio-economic impacts as the site is remote and does not receive a large amount of fishing effort. A small SMR has been proposed with a deepwater SMCA allowing salmon fishing and spot prawn trapping to minimize socioeconomic impacts. The proposed SMR would also optimize positive socio-economic benefits by enhancing the recreational experience provided by the existing underwater park by expanding protected habitat and limiting removal of mature adult specimens.
2: Most of this site is within the non-trawl RCA and recreational RCA.
3: Site is not expected to result in significant effort shift since area is remote and not subject to significant fishing effort.
4: SMR meets design criteria outlined in the NFMP and ARMP.
5: Within MBNMS and adjacent to state park.
6: Julie Pfeiffer Burns State Park “eyes on the water.”
7: Unknown.
8: Surveys were done in this areas when it was designated an underwater park. MARINe and PISCO sites are located at Partington Point.
9: Site has highly visible geographical boundaries.

Big Creek State Marine Reserve

Overall Goal: Overall purpose is to allow continuing research in a minimally disturbed area and to extend offshore extent and improve protection at small existing SMR. Proposed SMR would include deepwater submarine canyon habitat and communities. Expanded protection would more closely comply with MPF scientific guidelines and include deepwater habitats. The new boundaries would be more visible than the existing SMR boundaries and ease recognition and enforcement.

Boundaries: Northern: Rat Creek
Southern: Gamboa Point
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Contains diversity of nearshore rockfish, benthic species, intertidal invertebrates. Contains home to many rockfish, including some depleted species like bocaccio, and other finfish such as cabezon, kelp greenling, surfperches, and California sheephead. Includes the 19 NFMP species of rockfish. Site is an important forage area for otters. Area is within top 20th percentile for fish diversity.

Objective 2: SMR would protect the large and diverse intertidal system near Gamboa Point. Site is located south of the Point Sur upwelling center and north of the upwelling center at Lopez Point. SMR includes kelp forest, rocky reef, and offshore submarine canyons. Sandy and rocky intertidal, soft and hard bottom subtidal, giant kelp and surfgrass beds. Site contains many wash rocks and pinnacle boulders. Majority of subtidal area is sand.

Objective 3: Extends protection of benthic species to deeper waters.

Objective 4: Expanded SMR likely to better protect trophic structure and food webs.

Objective 5: Expanded SMR more likely to protect range of ecosystem functions.

Goal 2

Objective 1: Protecting 19 nearshore species, boccacio, canary goldeneye cowcod, lingcod, red and black abalone.

Objective 2: Protects deep reef adult population of benthic species.

Goal 3

Objective 1: Site adjacent to terrestrial reserve, which facilitates research and education and study opportunities.

Objective 2: Area is replicated at Partington and Salmon Creek SMRs.

Objective 3: Site has ongoing collaborative research project with commercial fishermen as partners.

Goal 4

Objective 1: Protects pinnacles. Expanded SMR would bring in submarine canyon heads.

Objective 2: Rocky intertidal, rocky reef (0- 30 meters, 30-100 meters), kelp forest.

Goal 5

Objective 1: Site is in remote section of coast and part of it is already a SMR. Capitalizing on existing protection and existing monitoring data would help positive socio-economic benefits.

Objective 2: Baseline monitoring is already established at this site.

Objective 3: The proposed SMR's increased size more closely approximates MPF scientific guidelines.

Design Considerations:

1: Site located in remote area, far from port, that receives relatively limited fishing effort. Expanding existing SMR reduces potential socio-economic impacts as compared to creating a new one.

2: Most of the area offshore of the existing SMR is within the non-trawl RCA and recreational.

3: Some of the area is already closed to fishing.

4: Site meets the design criteria of the NFMP and the ARMP.

5: Within MBNMS.

6: On-site reserve manager provides "eyes on the water."

7: N/A

8: Site has been a reserve since 1994. Research projects done in area. CCAMP water quality monitoring site on Big Creek. PISCO monitoring sites.

9: Proposed SMR would have clearer boundaries than existing small SMR.

Salmon Creek State Marine Reserve

Overall Goal: Protect high quality representative habitat and fill gap between Big Creek SMR and proposed Piedras Blancas SMR.

Boundaries:

	Latitude (DMS)		
	degrees	minutes	seconds
Northern—Salmon Creek	35	51	0
Southern—Salmon Creek	35	48	0

Offshore Extent: 3 nautical miles

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: Site contains large assemblage of rockfish species both nearshore and benthic.
Objective 2: Site includes extensive kelp forest, rocky reef interspersed with sand, large pinnacles.
Objective 3: Site can accommodate rockfish from juvenile to adult within one MPA.
Objective 4: Proposed SMR would protect natural trophic structure and food webs in representative habitat.
Objective 5: Proposed SMR would protect ecosystem structure, function and ecological processes (might be too small to do this effectively).

Goal 2

Objective 1: Site contains and should help protect resident goldeneye population plus 19 NFMP species, boccacio, lingcod, red & black abalone.
Objective 2: Site is located in upwelling center just south of Cape San Martin. SMR located here is likely to protect large individual fish that may produce larvae that helps seed areas downcoast.

Goal 3

Objective 2: Replicate of Big Creek and Partington SMRs.
Objective 4: Could enhance consumptive recreational experience through spillover of large fish to popular recreational fishing (CPFV) sites near Lopez Point.

Goal 4

Objective 1: Proposed SMR contains large pinnacles.
Objective 2: Proposed SMR would protect high quality representative intertidal habitats, rocky reef and sand habitats in 0 to 30 meters, 30-100 meter depth ranges and kelp forest.

Goal 5

Objective 1: Proposed SMR sited to leave more important recreational fishing sites open (Alder Creek access, Cape San Martin and Ragged Point).

Objective 3: Site may be too small to comply with MPF scientific guidelines.

Design Considerations:
1: Potential socio-economic impacts reduced by locating in remote section of the Study Area.
2: Some of area offshore is within the non-trawl RCA.
3: Very unlikely to result in effort shift since site receives little effort currently as compared to less remote areas with similar habitat.
4: Meets design criteria of the NFMP and the ARMP.
5: Within MBNMS. Proposed SMR includes Area of Special Biological Significance.
6: N/A
7: N/A
8: Unknown.
9: Proposed SMR would have clear boundaries.

Sub-Region V: Cambria Area Marine Protected Areas

Overall goal for sub-region: To protect high quality representative habitats and to provide a mix of MPAs specifically designed to enhance recreational and research opportunities and provide an opportunity to compare open, recreationally fished, and closed areas with similar habitat.

Development and evolution of proposal: These sites were developed based on the DFG Draft Initial Concepts, conversations with scientists who have monitored this section of coastline, and the Cambria area recreational fishing community. They are designed as a package to meet the needs of multiple stakeholders and specifically to focus most of the protection in this sub-region in areas that are relatively removed from the Morro Bay and Port San Luis fishing harbors. Specifically, no MPAs have been proposed for the area adjacent to Morro Bay and from Avila Point to Point Sal. These areas are not within the recreational RCA and are subject to considerable recreational fishing effort (Regional Profile maps 8 & 9).

Piedras Blancas State Marine Reserve

Overall Goal: Protect natural heritage site with high species and habitat diversity and excellent educational value. Extraordinarily rich biologically, with both types of kelp assemblage, extensive offshore and intertidal rocky reef across a depth range (0-54 fm); marine mammal populations including new elephant seal haul-out and northern fur seals. Both nearshore and some deepwater rockfish species frequent this area. Piedras Blancas has been identified by Oceana as "Very Important" Area.

Boundaries: Northern: Point Sierra Nevada
Southern: 2.2 miles south of Piedras Blancas at Highway One vista point.
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: High diversity of marine mammals at pinniped haul-out (California sea lion, elephant seals, harbor seals, Stellar seals, northern fur seals), California sea otter populations, rookeries include nesting peregrine falcons, Brandt's cormorant (largest colony in Monterey or San Luis Obispo county), guillemot, oystercatchers, snowy plover. Deep rocky reef species, 19 NFMP species, and assemblages of species of concern, including steelhead. Intertidal invertebrates include owl limpets & Beckett's reef. Historically one of the most productive abalone beds in California.

Objective 2: Habitat types contained in the proposed SMR include deep rocky reefs, *Macrocystis* kelp forest to the south, and *Nereocystis* kelp to the north at Cappuccino Cove where there is a distinct eddy pattern. The MPF notes, "these two types of kelp forests harbor distinct assemblages and should

be treated as separate habitats," (MPF p. 44). Area contains the largest persistent bull kelp canopy in Central California. SMR would include high relief deep-water structures and a large freshwater plume in the north. Area contains very diverse shoreline habitats including sandy beach, gravel beach, cobble beach, rocky headlands, and intertidal shelf. This area has the potential for larval retention in the lee of the point. Site contains lagoon at Arroyo de la Cruz and sand dunes.

Objective 3: Site provides prime habitat for large rockfish. This areas historically supported populations of large, sexually mature rockfish. The proposed SMR presents a good opportunity for restoration.

Objective 4: Proposed SMR includes rich intertidal environment, kelp beds, current eddies, and prominent point and rocky structure that attract large baitfish populations, sandy areas contain sand crabs, worms. Site could provide an excellent source of larvae for other MPA's as the shoreline's projection into the current allows for seeding downstream. A marine reserve located at this site could restore natural size and age structure of some fish populations and provide a good source of larvae for the other Cambria area MPAs.

Objective 5: A SMR at this location would protect a wide range of ecosystem structure, function and ecological processes given the diversity of habitats present and the favorable oceanographic conditions: lee of point likely serves as larval retention area. Site also represents a distinct oceanographic circulation feature.

Goal 2

Objective 1: Commercial trawling in the 1980's, recreational sport landing in 1990's, and continued fishjng by CPFV and live fish in 2000. Resident populations of cowcod, boccacio, golden eye, canary, steelhead, California elephant seals, peregrine falcons, snowy plovers, golden eagles, red and black abalone.

Objective 2: Site contains shallow reef, high relief and deep relief protect large mature rockfish individuals. Proposed SMR include an important transition zone for steelhead entering freshwater creek at Arroyo de la Cruz. Distinct oceanographic feature creates two eddies, one to the north and one to the south.

Goal 3

Objective 1: Site has been the subject of 50 years of intertidal research, prime field trip location for schools, diving area, surfing, and tourism. Collection of species composition and size data on site since 1978. On-site research facility with permanent intertidal transects established.

Objective 2: Replicate site would be Point Sur State Marine Reserve and Point Buchon State Marine Reserve. This site compares to Año Nuevo in level of diversity of species and habitats.

Objective 3: Site has attracted researchers from USFWS, BLM, CDFG, NOAA and many universities.

Goal 4

Objective 1: SMR would include pinnacles.

Objective 2: Unique site offering wide range of MPF specified habitats within a short distance: freshwater plume, offshore rocks, headlands, two types of kelp forests, sandy

beach, cobble beach, gravel beach, intertidal bench and multiple reef structures, some with high relief extending to 100 meters.

Goal 5

Objective 1: This area is used by both CPFV and "live fish" fishery. However, local landing has been closed since the mid-1990's. Morro Bay CPFV fishes this area approximately twice a week, 5 months per year, and trawling no longer permitted. "Live fish" fishery at is currently at historically low level of participants. Similar habitat available for fishing both closer to the harbors and beyond Point Sierra Nevada. This site is increasingly important for tourism as a major viewing area for of California elephant seals, harbor seals, California sea otters, bird watching, whale watching. Reserve status would contribute to attraction as a destination eco-tourist site, thus optimizing socio-economic benefits.

Objective 3: MPF guidelines on size and spacing are met. Most important is the unprecedented density and diversity of habitats in a small geographical area.

Design Considerations:

1: Designed to protect extraordinarily diverse, significant natural heritage site with high conservation and educational value that receives relatively limited fishing pressure, in conjunction with other Cambria sub-region MPAs. Provides excellent network of synergistic protection while allowing fishing to continue north of Point Sierra Nevada, within the proposed Cambria SMP, and south of the radar station.

2: Deeper water portions of the SMR are within the non-trawl RCA and some of the areas are within the recreational RCA.

3: Recreational fishing will be allowed and enhanced in nearby Cambria SMP. Commercial fishing will be allowed to the north of proposed Piedras SMR and to the south of proposed Ken Norris SMR. North of De la Cruz Rock is a favorite fishing area that has intentionally been kept open for fishing.

4: Site meets the design considerations in the NFMP and the ARMP.

6: Site offers adjacent federal/county "eyes on the water" to facilitate management, enforcement monitoring.

7: Extensive volunteer network serves the Piedras Blancas Lighthouse and the Friends of the Elephant Seal docent program assists at the haul-out site.

8: This area has an extensive monitoring program going back 50 years. Subtidal surveys have been conducted here. Marine mammal research also occurs at this site. CCAMP water quality monitoring site at Point Sierra Nevada. Annual grey whale count occurs here.

9: The northern boundary is near the highly visible De la Cruz Rock and the southern boundary is the lone grove of Monterey Cypress on the coast.

Cambria State Marine Park

Overall Goal: The overall goal of this proposed SMP is to enhance recreational small boat, kayak fishing, and spearfishing opportunities in a high quality habitat area that has historically been most important for recreational users but has been depleted by commercial livefish fishery in recent years. The proposed SMP would allow this area to recover and provide valuable replicate habitat to Ken Norris SMR for comparing a recreationally fished and unfished MPA. This and the Purisima MPA are the only such opportunities proposed in the Central Coast Study Area.

Boundaries: Northern: Little Pico Creek
Southern: Lampton Park
Offshore Extent: 2 nautical miles

Fishing Regulations: Recreational fishing only

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Area contains diverse nearshore and deepwater rockfish species and intertidal invertebrates, 18 of the NFMP species (not scorpionfish). Site contains resident sea otter population, harbor seals, white sea bass and California sheepshead. Area is within top 20th percentile for fish diversity. As an SMP, these species would not be protected in the MPA but impacts associated with commercial fishing would be reduced.

Objective 2: Proposed SMP includes rocky intertidal to 30 meters, 30-100 meter rocky reef. Site consists of large shale reefs interspersed with sand at the 30-100 m depth range. Shoreline includes coarse grain sand beaches and rocky intertidal. Site has persistent kelp forest. Large freshwater plumes carry sediment to kelp forest. Proposed SMP would include mouths of four steelhead creeks: Little Pico, Pico, San Simeon, and Santa Rosa Creeks.

Objective 3: Elimination of commercial fishing practices in this SMP would allow study and quantification of recreational impact on nearshore and benthic fish assemblages.

Goal 2

Objective 1: SMP would allow nearshore populations of rockfish to exist with recreation-only fishing pressure. If populations show increases this could profoundly expand opportunities for recreational fishermen in other areas.

Objective 2: SMP would allow entire nearshore rockfish complex to breed without interference from "live fish" stick, cable or trap gear.

Objective 3: SMCA offshore would allow harvest of salmon beyond 2 nautical miles from shore. SMP would allow recreational fishing for all species.

Goal 3

Objective 1: Park is directly in front of the increasingly popular tourist towns of Cambria and

San Simeon, and is adjacent to Hearst Castle. Site has good public access including a small boat access point (Leffingwell Landing). Lampton Park could provide interpretive facilities for this SMP and the adjacent SMR (signage). This is site of the oldest recreational fishing club on the Central Coast of California. Campground and restroom facilities and parking available at several locations.

Objective 2: This site replicates habitats found in the Cambria SMR to allow comparison of unfished and recreationally fished areas. Provides opportunity to measure the effects of recreational fishing effort. The only other proposed SMP that could provide this opportunity is proposed at Purisima Point.

Objective 3: Extensive field trip activity at San Simeon State Park, Camp Ocean Pines in Cambria. Children from around the state visit this section of coast to learn about marine life.

Objective 4: This SMP would eliminate commercial fishing pressure on nearshore rockfish.

Goal 4

Objective 2: As SMP does not meet MLPA requirements for replicating representative habitat in SMR.

Goal 5

Objective 1: The proposed SMP would have minimal negative socio-economic impacts due to the historically low participation in the live nearshore fishery and allowance of salmon fishing more than two miles from shore. The SMP would optimize socio-economic benefits for kayaking, diving, recreational fishing and tourism. In additional to being a popular local site for small skiff recreational fishing, this area is used by spearfishermen (Regional Profile Map 10b) and kayak fishers from northern and southern California (Kayak Fishing Association of Southern California). Compared to areas closer to Morro Bay and Port San Luis, this area has received less heavy fishing effort (Regional Profile Maps 8 & 9). Commercial fishermen would still have access to similar habitat to the north of the proposed SMP as well as miles of similar habitat to the south of the proposed SMP. The SMP would enhance recreational opportunities resulting in potential increases in recreational tourism revenues, etc.

Design Considerations:

1: This site has historically low level of commercial rockfish harvest. SMP would address interests of local community in enhancing recreational opportunities. In conjunction with proposed Ken Norris SMR, site provides rare opportunity to study impacts of recreational fishing.

2: Some of area within non-trawl RCA and recreational RCA.

3: The proposed SMP is unlikely to result in significant effort shift as miles of similar habitats would remain open to all fishing, including areas that are closer to port, offering improved access and safety.

4: N/A

5: Located at southern boundary of MBNMS.

6: Adjacent to San Simeon State Park, Lampton County Park, Shamel Park in Cambria and Leffingwell Landing.

7: Park would focus extensive network of volunteer observers on enforcement needs.

8: DFG has baseline data on fish abundance in this region from periodic research cruises since 1982 and from CenCal spearfish meets in the 1990s. CCAMP water quality monitoring sites at North Fork Pico Creek and Santa Rosa Creek.
9: Northern boundary clearly visible from the water (Highway 1 bridge at Little Pico Creek), southern edge of Cambria highly visible from water.

Ken Norris State Marine Reserve

Overall Goal: The overall goal of this site is to protect and replicate high quality representative habitats (including underrepresented habitats) and the species that depend on them in a SMR that could serve as a focal site for an MPA monitoring program. Site would also serve as "control" for adjacent Cambria SMP to allow study of impacts of recreational fishing.

Boundaries: Northern: Lampton Park
Southern: Radar Domes
Offshore Extent: 2 nautical miles

Fishing Regulations: SMR

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Area includes nearshore rockfish, rocky reef species, intertidal invertebrates including black abalone. Contains most of the 19 nearshore species of rockfish, and most of the species identified by the SAT as "likely to benefit" from MPAs. Species of concern include southern sea otters, marine mammals (offshore rocks serve as haul outs). Area is within top 20th percentile for fish diversity.

Objective 2: SMR would protect outstanding kelp beds, rocky reef, depth ranges identified in the MPF (0-30 and 30-100 meters). This site includes a diverse mixture of rocky intertidal, sandy beach, pinnacles, and rocky reef with interspersed soft bottom.

Objective 3: This SMR would protect the natural size and age structure of all species likely to be protected by reserve of this size.

Objective 4: SMR would protect natural trophic structure and food web.

Objective 5: SMR would help protect structure, function and ecological processes characteristic of kelp forest and rock/sand ecosystem.

Goal 2

Objective 1: This SMR would help protect most of the 19 nearshore species, boccacio, canary, lingcod, red and black abalone.

Objective 2: This SMR could help protect larval sources and retain large nearshore rockfish and invertebrate species.

Objective 3: Salmon fishing allowed in SMCA beyond 2 nautical miles.

Goal 3

Objective 1: This proposed SMR is located adjacent to UC Natural Reserve (terrestrial). The existing UC Reserve provides extensive educational and particular research opportunities and regularly hosts university students and researchers.

Objective 3: The site is already used by various UC campuses for a variety of monitoring and other research projects. PISCO has ongoing intertidal and subtidal monitoring sites in this area. The MARINe program has a study site within this proposed SMR that monitors species of algae and invertebrates. DFG has baseline data on fish abundance in this region from periodic research cruises since 1982.

Goal 4

Objective 1: Proposed SMR includes pinnacles.

Objective 2: SMR would protect and replicate representative kelp forest, rocky intertidal, sandy beach, rock reef and sand habitat.

Goal 5

Objective 1: The small size of this SMR, the adjacent proposed SMP open to recreational fishing, and the availability of similar habitat closer to Morro Bay Harbor minimizes any socio-economic impacts associated with this site. Although an existing leased kelp bed would need to be phased out of use, the section of the lease contained in the proposed SMR is very rarely harvested, as plenty of kelp exists closer to users. Exceptional educational, research and monitoring opportunities offered by the site ensure site optimizes positive impacts.

Objective 2: This site is an ideal location to use as a focal point for an MPA monitoring program.

Design Considerations:

1: There is a historically low level of commercial rockfish harvest in this area. Site provides significant benefits to research and education community. This is an important opportunity for research not provided at other MPA sites in California.

3: Area to the north open to recreational fishing; area to the south open to recreational and commercial fishing thus serial depletion unlikely.

4: Proposed SMR meets the design criteria of the NFMP and ARMP.

5: UC Reserve programs are complementary to the purpose of this SMR.

6: Adjacent to terrestrial reserve with on-site manager ensuring "eyes on the water."

7: Volunteer monitoring available due to status and purpose of adjacent UC Reserve.

8: Several long-term monitoring sites already being utilized in the proposed SMR. Baseline data on fish abundance from 1982. Area is used by various UC campuses for a variety of monitoring and other research projects. PISCO has ongoing intertidal and subtidal monitoring sites in this area. The MARINe program has a study site within the proposed SMR that monitors species of algae and invertebrates.

9: Boundaries of this site are clearly visible from the ocean.

Cambria State Marine Conservation Area

Overall Goal: To provide some level of extended protection for Cambria SMP and Ken Norris SMR offshore while allowing salmon fishing to minimize socio-economic impacts.

Boundaries*: Northern: Little Pico Creek
Southern: Radar Domes
Offshore Extent: 2-3 nautical miles
*This SMCA rests adjacent offshore to both the proposed Cambria SMP and Ken Norris SMR.

Fishing Regulations: Salmon fishing only

Estero Bluffs Intertidal State Marine Reserve

Overall Goal: Protect intertidal habitat and communities and enhance educational values at site with high benthic invertebrate diversity.

Boundaries: One half mile on either side of Cayucas Point. From mean high tide to -2.0' below mean lower low tide.

Fishing Regulations: No intertidal collection of invertebrates**.** No shorefishing.

CCRSG Goals and Objectives:

Goal 1
Objective 1: This SMR is too small and too narrow to fully meet this objective for a wide range of species. However, it is designed specifically to protect intertidal invertebrates. Contains area of plover forage grounds. Harbor seal pupping area on beach at Point. Villa Creek is steelhead habitat.
Objective 2: MPA contains rocky intertidal, sandy beach and cliffs.

Goal 2
Objective 3: Site is designed as compromise that allows access to traditional fishing rounds while providing limited protection to intertidal invertebrates.

Goal 3
Objective 1: Adjacent to Estero Bluffs State Park. Area has excellent public access and provides educational opportunities for local community.

Goal 4
Objective 2: Protects representative intertidal reef and sand habitat.

Goal 5
Objective 2: Does NOT meet MPF scientific guidelines.

Design Considerations:
1: Site is designed specifically to minimize socio-economic impacts. Proposed SMR includes only 1 mile of 4-mile long beach. Historic access areas remain open to fishing. SMR located in more remote area of beach. May not optimize positive benefits as much as an alternative larger SMR capturing more habitat types, protecting more species and extending into deeper waters.
3: Site will not impact fishing.
4: May meet some of design criteria in ARMP, too small to meet design considerations in NFMP.
5: Adjacent to Estero Bluffs State Park.
6: Area has high level of community support. Local community members could act as eyes on the tidepools. Cayucas Land Conservancy has volunteers working on adjacent lands who might serve as docents, etc.
9: Boundaries are visible. As intertidal site, boundary signage possible.

Sub-Region VI: Santa Maria Basin Marine Protected Areas

Overall goal for sub-region: To protect outstanding habitat at Point Buchon, underrepresented and replicate habitat at Morro Bay, and to improve protection in between Point Sal and Point Conception – an area that provides the critical ecological linkage between California's southern and northern marine ecosystems. The area around Point Conception is therefore a critical focal point for marine conservation both because it is characterized by unique oceanographic and biologic conditions and because it serves as a transition zone with high species diversity.

Development and evolution of proposal: The proposals for this sub-region are based on proposals in the Draft Initial Concepts, ideas presented by PRBO and NRDC in MPA submissions, discussions with scientists familiar with this area of the coast, and discussions with local community members and stakeholders including the director of the Morro Bay Estuarine Reserve.

Morro Bay Ecosystem Marine Protected Area

Overall Goal: Morro Bay is one of the largest undeveloped coastal wetlands in California. The overall goal of this proposed SMR is to protect (and replicate) rare estuarine habitat and the wide diversity of biological communities that rely upon it. The proposed SMR would include tidal marsh on the eastern side of the bay and some of the key eelgrass habitat in the south. The proposed SMCA would essentially allow the continuation of current fishing activities in the center of the Bay.

Morro Bay is part of the National Estuary Program and contains a state park and a heron rookery, making it an excellent site for education, monitoring, and cross-jurisdictional management. While there is little, if any, fishing pressure in the back part of Morro Bay, it is the unique nature of this area and its high non-consumptive value that warrants protection as a SMR. We propose consideration of additional disturbance protections as appropriate to protect bird populations that rely on the bay, while enhancing outstanding bird watching opportunities.

The outside spit intertidal reserve is intended to integrate a sandy bottom reserve with the entire bay protected area, while prohibiting collection of native clams, worms, and other invertebrates. The ecosystem MPA ties all aspects of the Bay into one protected area and will provide valuable educational opportunities.

The Regional Profile identifies large estuaries as areas of regional biodiversity significance. The MPF notes that "Given the[ir] critical ecological roles and ecosystem functions, estuaries warrant special delineation as a critical California coastal habitat," (MPF pg. 43). Seagrass beds are specifically called out for protection in the MLPA itself.

Boundaries: Northern: Eastern lobe of bay, from north tip of White Point
Southern: End of Mitchell Drive South
Outside Spit: East of Shark's Inlet to east of Mitchell Drive, intertidal
Offshore Extent: N/A

Regulations: From north State Park Boundary on West side of Shark's Inlet and south; surrounding Sweet Springs Audubon area, and south of Los Osos creek channel on eastern lobe of bay we recommend consideration of additional regulations as necessary to reduce bird roosting disturbance.

Marine Conservation Area allows recreational fishing and mariculture operations

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Morro Bay contains a tremendous diversity of species including a wide range of seabirds, steelhead, skates, bat rays, leopard shark, mud shrimp, ghost shrimp, clams, and many others.

Objective 2: The proposed SMR contains salt marsh, intertidal mud flats, eel grass beds, wetlands and freshwater plumes. It is one of the largest undeveloped coastal wetlands in California. Eelgrass habitat is identified in the Gap Analysis as being underrepresented in existing MPAs.

Objective 3: The proposed SMR could help protect natural age structure for resident species such as some invertebrates.

Objective 4: The proposed SMR would help protect natural food webs characteristic of estuarine communities.

Objective 5: Morro Bay provides an essential nursery environment for many species, provides shelter to juvenile fish and a wide array of invertebrates, and serves as forage grounds for fish and seabirds. The boating restrictions proposed are designed to protect critical bird roosting and nesting functions from disturbance by vessels.

Goal 2

Objective 1: Provides habitat for steelhead.

Objective 2: Morro Bay serves as important nursery area and serves as larval source for species dwelling in tidal wetlands and eel grass beds.

Goal 3

Objective 1: Reserve is adjacent to Morro Bay Natural History Museum and Morro Bay State Park and is popular with non-consumptive recreational users including kayakers, bird watchers, beach combers, etc.

Objective 2: Morro Bay SMR would help provide a replicate of the proposed expanded Elkhorn Slough SMR.

Objective 3: Morro Bay is part of the Natural Estuary Program which includes an educational curriculum for both hands on and in classroom.

Goal 4

Objective 1: Morro Bay is one of only two major estuarine areas within the Central Coast Study Region.

Objective 2: Contains eel grass beds and large intertidal salt marsh.

Goal 5

Objective 1: The proposed SMR was designed specifically to avoid impacting any current

economically significant activities. The SMR would benefit conservation, education and non-consumptive recreational interests, thus optimizing positive socio-economic benefits. Boating restrictions have been carefully crafted to allow continued use of kayaks and other vessels by directing use to appropriate areas (channels areas rather than vulnerable areas critical to bird roosting and nesting where disturbance risks are especially acute).

Design Considerations:
1: Designed to avoid impacts to fishing, mariculture, hunting, etc.
2: N/A
3: Would not cause shift in fishing effort.
4: N/A
5: SMR would complement (and benefit from) programs of National Estuary Program.
6: Adjacent to Morro Bay State Park and Natural History Museum, which could facilitate management, enforcement and monitoring.
7: Surrounding parks and other facilities utilize a wide range of volunteers and enforcement personnel who could be recruited to assist with SMR. Cal Poly SLO close by.
8: Existing monitoring studies underway at slough. Proposed "Ecosystem Based Management Study" with Cal Poly and local agencies and stakeholder groups will include human use research.
9: Clear boundaries visible from any point in the back bay, simple channel markers could be provided to direct boaters.

Point Buchon State Marine Reserve

Overall Goal: Protect outstanding habitat including kelp bed, pinnacles, and shallow hydrocorals. Site has been identified by Oceana as "Very Important" Area. SMR contains northern monitoring site for Diablo Power Plant providing excellent source of baseline and ongoing monitoring data at no cost to the Departement of Fish and Game.

Boundaries: Northern: Islay Creek
Southern: Northern edge of the Diablo Canyon security closure
Offshore Extent: 1 nautical mile

Fishing Regulations: SMR

CCRSG Goals and **Objectives:**

Goal 1

Objective 1: Diverse assemblages of nearshore and deep rocky reef species, intertidal invertebrates. Contains shallow populations of hydrocorals. Bird colonies. Area is within top 20th percentile for fish and seabird density and is high density area for sea otters.

Objective 2: This area contains pinnacles, intertidal, kelp forest and interspersed sandy and rocky reef habitat, and associated marine life communities including hydrocorals (to 49 meter depth). Species of concern include southern sea otters, marine mammals and seabirds. This area is within a hotspot for fish density as identified by NOAA Biogeographic Assessment. Over 800 taxa have been documented in this area by studies performed by Tenera Environmental as part of the Diablo Canyon Power Plant licensing requirements. Habitats protected include pinnacles, shallow populations of hydrocoral, rocky reef, sandy bottom, kelp forest, offshore rocks and rocky intertidal. Extends protection across two of the depth ranges identified by the SAT: 0-30 m, 30-100m.

Objective 3: Proposed SMR would protect natural age and size structure of wide range of species.

Objective 4: Proposed SMR would protect trophic structure and food web.

Objective 5: Proposed SMR would protect unique biogenic habitat provided by shallow water hydrocoral populations.

Goal 2

Objective 1: SMR would protect 19 NFMP species, boccacio, canary, goldeneye, cowcod, lingcod, red and black abalone.

Objective 2: Proposed SMR would protect and enhance reproductive capacity of many species likely to benefit from MPAs.

Goal 3

Objective 1: SMR designed specifically to include northern monitoring site for Diablo Canyon Power Plant.

Objective 2: Similar to area to the south of Diablo Canyon Power Plant which would remain open to fishing providing "fished" and "unfished" replicate sites.
Objective 3: Potential for collaborative research due to close proximity to local communities.

Goal 4
Objective 1: Site protects pinnacles and unique shallow water hydrocoral populations.
Objective 2: Site contains outstanding example of representative rocky intertidal, kelp forest, and rocky reef (0-30 meter) habitat.

Goal 5
Objective 1: Site is located in the northern half of the area between Avila and Point Buchon in an effort to protect outstanding habitat while keeping the fishing grounds between Avila and the power plant open. Fishermen from Morro Bay can still access the waters to the south of the power plant as well as similar habitat to the north of Morro Bay. The siting of this SMR attempts to minimize socio-economic impacts while optimizing benefits. Proposals to "recognize" existing security closure at Diablo Canyon area would not achieve the ecological goals of this SMR as the security closure is within the zone of influence of the power plant's thermal discharge.
Objective 3: The proposed SMR does not meet the MPF scientific guidelines regarding offshore extent and may need to be expanded or buffered with an offshore SMCA.

Design Considerations:
1: Proposed SMR attempts to take into account interests of all users by maintaining access to similar habitat for fishing and protecting exceptional conservation area.
2: Adjacent to small security closure at Diablo Canyon Power Plant.
3: By ensuring that half of the area between Avila and Point Buchon remains open to fishing, current users can divert effort to the open area.
4: Site meets design criteria in NFMP and ARMP.
5: Unknown.
6: The area is adjacent to the Diablo Canyon Power Plant security closure providing a full-time, on-site enforcement presence.
7: Unknown.
8: Due to the presence of power plant, extensive monitoring has been done in this area and will continue to be funded and performed in the future. Past research and data sets include a comprehensive marine biological and oceanographic study that included both subtidal and intertidal studies to identify and enumerate fishes, invertebrates, surfgrasses, and algae. This data covers more than two decades. The power plant has ongoing subtidal monitoring sites in this area and will be required to continue regular monitoring over the lifetime of the facility.
9. By using the creek and the power plant as the boundaries, the extent of the SMR would be very clear.

Purisima Point State Marine Reserve and State Marine Park

Overall Goal: To protect representative hard bottom interspersed with sand habitat that is critical to a wide diversity of fish, invertebrate and seabird and marine mammal populations, to protect critical seabird and marine mammal roost/haul-out habitat, and to protect the prey of seabirds and marine mammals foraging in this area. Proposed SMR and SMP follows recommendation of Point Reyes bird Observatory (PRBO) who have done extensive seabird forage studies in this area. Proposed SMP has been identified by Oceana as a "Very Important" Area.

Boundaries:

SMR: Northern: San Antonio Creek
Southern: Seal Beach
Offshore Extent: 3 nautical miles

SMP: Northern: Seal Beach
Southern: Lompoc Landing
Offshore Extent: 3 nautical miles

Fishing Regulations: SMR
SMP - Shorefishing only.

CCRSG Goals and Objectives:

Goal 1

Objective 1: This is an area of known biological diversity; it contains a wide variety of nearshore rockfish, rocky reef species, intertidal invertebrates, pelagic fishes, seabirds and marine mammals. The 19 NFMP species of rockfish, and most of the species identified by the SAT as "likely to benefit" from MPAs are found in this area. Scorpion fish, white sea bass, and sole would benefit. This site will protect vital habitat for commercially important fish and invertebrate species as well as the top predators that prey on them. The dune habitat adjacent to Purisima Point provides critical nesting habitat for approximately 160 endangered California least terns. Important prey for these terns include northern anchovies, juvenile cabezon, and juvenile rockfish. The coastal cliffs south of Purisima Point provide nesting habitat for approximately 120 pigeon guillemots and the rocky shores provide nesting habitat for 4 black oystercathers. The point itself provides vital roost/haul-out habitat for hundreds of endangered brown pelicans in addition to hundreds of Brandt's, double-crested, and pelagic cormorants, California gulls, Heerman's gulls, western gulls, and harbor seals. The point also provides important foraging habitat for thousands of shorebirds including black oystercatchers, black-bellied plovers, surfbirds, sanderlings, whimbrels, wandering tattlers, black and ruddy turnstones and spotted sandpipers. The kelp beds found in waters leeward of the point provide critical foraging habitat for southern sea otters. Large foraging flocks consisting of the pelicans, cormorants, and gulls mentioned above as well as sooty shearwaters, Pacific loons, western grebes. California sea lions, and bottlenose and common dolphins occur in waters on both sides of the point.

Objective 2: The proposed SMR contains both soft and hard bottom substrate. Rocky reef is relatively limited between Point Sal and Point Conception. The area also contains dune habitat, coastal cliffs and kelp beds.
Objective 3: The proposed SMR would help protect natural age structure and size for a number of fish and invertebrate species.
Objective 4: The proposed SMR will help protect the existing food web including protecting forage for higher predators.
Objective 5: The proposed SMR would help protect a wide range of ecosystem functions and ecological processes.

Goal 2
Objective 1: The proposed SMR contains most of the 19 NFMP species, brown rockfish, white seabass, cowcod, goldeneye, lingcod, boccacio, red and black abalone. As noted above, it also provides important habitat for numerous listed birds and marine mammals.
Objective 2: The lee of Purisima Point likely serves as a larval retention area.
Objective 3: The proposed SMP would allow shorefishing at a traditional fishing site.

Goal 4
Objective 2: The proposed SMR would protect representative rocky reef, kelp forest and soft bottom habitats.

Goal 5
Objective 1: The proposed SMR is designed to leave the area around Point Sal (which is more easily accessible from port and therefore more heavily fished) open to fishing activities. A larger SMR encompassing both the north and south side of Point Sal would be preferred from a conservation perspective but was not proposed, in an effort to accommodate all interests.
Objective 3: Expanding protection in the Santa Maria Basin sub-region improves compatibility with the MPF Guidelines regarding size and spacing of MPAs.

Design Considerations:
1: Helps to protect nearshore species, birds and marine mammals while keeping popular fishing areas open.
3: Located in a fairly remote area of the state, large areas of similar habitat remain open to fishing between this site and Morro Bay/Port San Luis and in between this site and the SMR proposed at Point Conception, limiting the likelihood of displaced effort.
4: Meets some of the design criteria outlined in the NFMP and ARMP.
5: As a largely undeveloped area with strict regulations on land use, the Vandenberg area is primarily open space, reducing impacts associated with urban development.
6: The proximity of Vandenberg Air Force Base could assist with management, enforcement and monitoring.
8: Unknown.
9: Boundaries are extremely clear physical promontories.

Point Conception State Marine Reserve

Overall Goal: This site is on one of the two major bioregion breaks in the State. The goal of theis proposed MPA is to provide additional protection to habitats and biological communities associated with both sandy and rocky bottom, located at the confluence of the California Current and the counter-current in the southern California Bight. This is an area of extraordinary diversity, uniqueness, and importance. In addition, the proposed SMR will help protect the southern sea otter, a species listed as threatened under the Endangered Species Act. The proposed SMR would help produce larvae and adult fish that could enter the current that bathes the northern Channel Islands and the Channel Island MPA network, thus directly contributing to the MLPA's requirement that California's MPAs be designed and managed as a network. Site has been identified by Oceana as a "Very Important" Area.

Boundaries: Northern: Mouth of Water Canyon
Southern: Point Conception Lighthouse
Offshore Extent: 1 nautical mile

Fishing Regulations: SMR

CCRSG Goals and Objectives:

Goal 1

Objective 1: This is an area of known biological diversity; it contains a wide variety of nearshore rockfish, rocky reef species, intertidal invertebrates, pelagic fishes, seabirds and marine mammals. The 19 NFMP species of rockfish, and most of the species identified by the SAT as "likely to benefit" from MPAs are found in this area. Scorpion fish, white sea bass, and sole will benefit as well. This site will protect vital habitat for commercially important fish and invertebrate species as well as the top predators that prey on them. Rocky cliffs provide critical nesting habitat for guillemots, cormorants, oystercatchers, and brown pelicans. Soft bottom habitat attracts surf scooters and sole. The cliffs and rocky shores of this area provide critical nesting habitat for approximately 1,100 pigeon guillemots, 120 pelagic cormorants, 130 Brandt's cormorants, 18 black oystercatchers, and 80 western gulls. The cliffs and offshore rocks provides vital roost/haul-out habitat for hundreds of endangered brown pelicans in addition to hundreds of Brandt's, double-crested, and pelagic cormorants, Herman's gulls, western gulls, California sea lions, and harbor seals. The kelp beds found in waters leeward of the promontory provide critical foraging habitat for southern sea otters and this area has been identified by biologists as critical to the recovery of this species. Large foraging flocks consisting of the pelicans, cormorants, and gulls mentioned above as well as sooty shearwaters, Pacific loons, western grebes, California sea lions, and bottlenose and common dolphins.

Objective 2: The proposed SMCA contains primary soft bottom habitat but also contains hard bottom substrate which is relatively limited between Point Sal and Point Conception. The SMR is located in a high energy area where intense coastal upwelling occurs (between Point Arguello and Point Conception). Point Arguello

is also the largest promontory to disrupt the equatorward flow of the current creating unique habitat conditions.

Objective 3: The proposed SMCA would only limit fishing within the first mile from shore.

Objective 4: The proposed SMR will help protect the existing food web including protecting forage for higher predators.

Objective 5: The proposed SMR would help protect the unique ecosystem that is characteristic of the transition zone between northern and southern California waters. This SMR will also specifically protect forage for top predators including fish, marine mammals and seabirds. Finally, the proposed SMR will help with the recovery of the southern sea otter by ensuring that sea otters at the edge of the existing range are not impacted by gear entanglements.

Goal 2

Objective 1: The proposed SMR contains most of the 19 nearshore species, brown rockfish, white seabass, cowcod, goldeneye, lingcod, boccacio, red and black abalone. As noted above, it also provides important habitat for numerous listed birds and marine mammals.

Objective 2: The proposed SMR is located in an upwelling center and includes coastal promonotories. Recent research has shown waters on the leeward sides of coastal promontories provide refuge for larvae of fish and invertebrate species against offshore transport during upwelling events. The lee of each of these promontories likely serve as larval retention areas.

Goal 3

Objective 1: The proposed SMR is in a relatively remote location.

Goal 4

Objective 2: The proposed SMR would not meet the requirements for protecting representative habitat.

Goal 5

Objective 1: The proposed SMR extends out only one mile from shore in an effort to meet some conservation objectives while minimizing socio-economic concerns.

Objective 3: The proposed SMR would not meet the MPF scientific guidelines with respect to extending protection offshore.

Design Considerations:

1: SMR would helps to protect nearshore species, birds and marine mammal and continues to allow fishing offshore.

3: Site is located in a fairly remote area of the state; large areas of similar habitat remain open to fishing between this site and Morro Bay/Port San Luis and Santa Barbara/Ventura harbors, limiting the likelihood of displaced effort.

4: Meets some of the design criteria outlined in the NFMP and ARMP.

6: Existing monitoring in area includes seabird and forage studies by PRBO and PISCO monitoring sites.

8: Unknown.

9: Boundaries are clear physical promontories.